



Strategies for Improving Education Quality Management Towards World-Class Education

Ade Sofa ^{*1}, Kasful Anwar Us ², Fridiyanto Fridiyanto ²

¹ Institut Administrasi dan Kesehatan Setih Setio Muara Bungo, **Indonesia**; ² Sultan Thaha Saifuddin State Islamic University of Jambi, **Indonesia**.

✉ adnif99@gmail.com

Open Access

This article
contributes to:



Abstract. This study explores the strategies implemented by Universitas Islam Indonesia (UII) in enhancing educational quality management as part of its pursuit toward becoming a World Class Education (WCE) institution. Using a qualitative descriptive method, the research focused on the Faculty of Islamic Studies (FIAI), including academic programs and supporting units engaged in quality initiatives. Data were gathered through interviews, document analysis, and observation of quality assurance practices. The findings reveal that UII has established a robust Quality Management System (QMS) grounded in continuous improvement, stakeholder involvement, and digital integration. Leadership at multiple institutional levels plays a transformative role in aligning vision and operational goals. Furthermore, collaboration with international partners and participation in accreditation processes have elevated institutional performance and visibility. Despite existing challenges, UII's strategies in quality assurance—rooted in both Islamic values and global best practices—represent a strong foundation for sustainable academic excellence in the international arena.

Keywords: Quality Management, World Class Education, Higher Education Strategy, Stakeholder Engagement, Universitas Islam Indonesia.

1. Introduction

In the context of global higher education, universities are increasingly evaluated based on their ability to deliver world-class quality [1]. The concept of World Class Education (WCE) emphasizes excellence in teaching, research, service, and international competitiveness. Islamic higher education institutions, such as Universitas Islam Indonesia (UII), face heightened expectations to balance faith-based values and global academic standards. As competition intensifies, UII must proactively enhance its educational quality management system in order to secure regional and international recognition [2]. Consequently, an aligned strategic framework becomes essential for UII to navigate toward WCE status. The background of this research is rooted in UII's aspiration to harmonize its Islamic identity with rigorous quality benchmarks [3].

UII, as one of Indonesia's oldest private Muslim universities, has a strong historical reputation in national education [4]. Yet, newer domestic and international institutions are becoming attractive to students seeking globally recognized qualifications. Rankings such as QS World University Rankings and Times Higher Education (THE) influence prospective students and faculty choices. To remain competitive, UII leadership acknowledges the need to strengthen internal quality assurance systems and to align academic programs with international standards [5]. The background thus explores how UII's strategic management can support its evolution into a globally recognized institution without compromising its religious mission. This dual challenge drives the urgency behind adopting a World Class Education framework [6].

A core component of UII's quality management strategy is the development of a robust internal quality assurance (IQA) mechanism. IQA involves continuous program

Article info

Submitted:
2025-4-2

Revised:
2025-7-12

Accepted:
2025-7-13



This work is licensed
under a Creative
Commons Attribution
4.0 International
License.

evaluation, stakeholder feedback, and alignment with accreditation bodies like BAN-PT and AQAS [7]. Incorporating global accreditation standards into IQA enables mutual recognition and facilitates student mobility. At the same time, the university must ensure compliance with Islamic academic principles and ethos. The background of this study examines UII's efforts to integrate both global and religious quality frameworks [8]. Examining these processes is important for understanding how faith-based universities adapt to WCE benchmarks.

The institutional vision and mission of UII explicitly mention excellence in education, research, community service, and Islamic character. Translating these principles into operational strategies requires transforming organizational culture. Leadership at UII has initiated reforms in governance structures, establishing units dedicated to quality and internationalization [9]. The background investigates these structural reforms and their impact on quality management. It also considers the role of leadership in messaging and embedding quality values at all levels. Understanding the leadership's influence on culture is critical for evaluating UII's strategic readiness for WCE [10]. Curricular innovation is another focus area in UII's strategy to enhance educational quality. Adopting a global perspective, UII has introduced dual-degree programs, international modules, and English-medium instruction in selected faculties [11]. These steps are aimed at boosting graduate employability and enhancing academic reputation. Still, challenges such as faculty capacity, resource limitations, and curriculum alignment remain. The background explores how UII addresses these challenges and incorporates strategic planning into curriculum development. The successful integration of global components reflects UII's commitment to WCE.

Faculty development plays a pivotal role in UII's quality enhancement strategy. Professional development programs, international academic collaborations, and performance-based incentives have been introduced to build faculty capacity [12]. The background reviews the scope of these initiatives and their alignment with global best practices. It also considers how these programs maintain an Islamic pedagogical approach. Evaluating faculty development is essential for assessing the depth of strategic change at UII. This informs whether WCE goals can be sustainably achieved. Technological infrastructure and digital transformation are increasingly central to educational quality worldwide. UII has invested in Learning Management Systems (LMS), e-libraries, and virtual classrooms to modernize teaching and learning. Such investment also supports data-driven decision-making and continuous quality monitoring. The background section explores how digital transformation aligns with both Islamic values and WCE objectives. It emphasizes that technological adoption is not only a matter of innovation, but also a strategic enabler of global academic standards. The background thus frames digital advancement as foundational [13].

Stakeholder engagement is key to educational quality in any institution. UII seeks to involve students, alumni, industry partners, and external evaluators in its quality assurance processes. The background considers how these stakeholders contribute insights into curriculum relevance and institutional reputation. By fostering strong external partnerships, UII strengthens its role in national and international educational ecosystems. This section highlights the significance of collaboration in UII's WCE strategy. Understanding stakeholder dynamics adds depth to the strategic analysis [14].

Financial sustainability and resource management are critical enablers of quality improvement. UII's strategic plan includes provisions for funding quality initiatives, scholarships, facility upgrades, and international partnerships. The background investigates budgeting strategies and revenue diversification, including philanthropic and

research grants. It also considers the tension between investing in quality and ensuring affordability for students. Financial strategy forms an essential pillar enabling WCE ambitions. This adds a practical dimension to the university's path toward excellence [15].

Governance transparency and accountability reinforce institutional credibility. UII has introduced performance dashboards, regular audits, and public reporting of academic and administrative indicators. The background examines the efficacy of these mechanisms in supporting quality management. It also assesses how governance aligns with Islamic ethical principles such as justice and stewardship. Transparent governance supports external trust and attracts international partnerships. Without such mechanisms, WCE aspirations may lack substance [16].

Finally, the background highlights the importance of monitoring and evaluation in achieving WCE aspirations. UII has established performance indicators such as international rankings, graduate outcomes, research outputs, and accreditation achievements. The background explores the strategic use of data for decision making and continuous improvement [17]. It also addresses potential gaps between strategic planning and actual execution. This last part frames the need for evidence-based management within UII's quality strategy, laying the groundwork for the study's research focus.

2. Method

This study employed a qualitative descriptive approach to explore the strategies implemented by Universitas Islam Indonesia (UII) in enhancing educational quality management toward achieving World Class Education (WCE). The research focused specifically on the Faculty of Islamic Studies (Fakultas Ilmu Agama Islam/FIAI), including selected study programs and supporting units directly involved in the planning and implementation of quality assurance initiatives. Through this approach, the study aimed to understand how UII aligns its institutional vision with global quality benchmarks while preserving its Islamic values. Data were collected through semi-structured interviews with key academic leaders, quality assurance personnel, and administrative staff, alongside document analysis of strategic plans, accreditation reports, and internal evaluations.

The research was conducted as a Mini Research project over a one-month period, from June 2 to July 2, 2025, at Universitas Islam Indonesia in Yogyakarta. Observations of internal academic activities and quality assurance procedures were also carried out to complement interview findings and provide contextual depth. Triangulation techniques were applied to ensure data credibility by comparing findings from interviews, documents, and field observations. The collected data were then thematically analyzed to identify key strategies, challenges, and outcomes related to the improvement of educational quality. The results of this study are expected to contribute to the development of an integrated model for faith-based universities in pursuing World Class Education through effective quality management systems [18].

3. Result and Discussion

3.1 Strategic Leadership in Quality Management Toward World Class Education

Universitas Islam Indonesia (UII) demonstrates strategic leadership as a foundational pillar in its journey toward World Class Education (WCE). Campus leaders, including deans and faculty heads within the Faculty of Islamic Studies (FIAI), play an active role in designing and implementing academic quality policies. Through semi-structured interviews, it was revealed that leadership commitment goes beyond

administrative oversight, focusing instead on capacity-building and long-term quality enhancement. These leaders consistently align their quality initiatives with UII's Islamic identity, showing an integrated approach to academic excellence. The proactive involvement of leadership ensures that quality assurance (QA) is embedded within the institutional culture. This proactive stance cements transparency and collective ownership of quality outcomes [19].

UII's leadership teams have institutionalized quality management through regular internal audits and performance reviews. These mechanisms, supported by senior academics, help monitor program compliance with national and global quality benchmarks. The review panels include both internal stakeholders and external experts, ensuring impartiality and credibility. Leaders also introduced key performance indicators (KPIs) related to graduate outcomes, accreditation status, and stakeholder satisfaction. By consistently tracking these metrics, UII leadership builds accountability at every level. This systematic approach demonstrates how leadership translates vision into measurable actions [20].

Several leadership-led initiatives were documented to strengthen teaching quality within FIAI. These include annual peer-review workshops, curriculum alignment sessions with accreditation bodies, and benchmarking visits to internationally accredited universities. Leaders emphasized continuous improvement rather than one-off efforts, creating a cycle of reflection and curriculum refinement. University authorities also support staff training in modern pedagogy, including blended and online learning. These efforts indicate that leadership is deliberately enhancing teaching effectiveness. The formative nature of these initiatives reflects a research-driven approach to quality [21].

Leadership also plays a critical role in promoting digital transformation. UII has upgraded its Learning Management System and introduced AI-assisted evaluation tools to streamline data collection and quality tracking. Interviewed academic staff confirmed that these upgrades led to faster feedback cycles and improved curriculum responsiveness. Leadership ensured investments in IT infrastructure, even amid budget constraints, signaling a clear strategic priority. These digital tools serve as evidence of leadership's forward-thinking mindset. Their integration strengthens quality governance across academic processes.

Beyond systems and technology, leadership drives a participatory culture of quality improvement [22]. Faculty members, administrative personnel, and students are regularly invited to QA forums where feedback is discussed and acted upon. This approach ensures diverse perspectives are integrated into quality enhancement processes. Many respondents highlighted that they felt heard and noticed campus-wide QA changes starting at operational levels. Participatory monitoring helped uncover hidden obstacles and spark new improvement ideas. Leadership's openness to inclusive decision-making contributes to true institutional change. Leadership has also targeted the professional development of quality champions within FIAI. These champions are faculty and staff members encouraged to lead accreditation efforts and mentor peer departments. According to interviews, champions undergo tailored coaching in quality audit preparation and external review readiness. Leadership supports these roles with time allocation and recognition in performance evaluations. Empowering QA champions decentralizes responsibility and builds internal capacity. This strategy demonstrates leadership's commitment to sustained quality ownership.

Resource allocation to support quality initiatives is another area influenced by leadership. The university budget includes an annual line item for quality enhancement activities, such as accreditation application support, facility upgrades, and staff training.

Leaders prioritize funds based on strategic needs rather than historical budgets. Faculty heads reported timely support for QA events, conferences, and methodological upgrades. Such funding decisions reflect leadership's proactive stance toward QMS sustainability. They also reveal strategic prioritization aligned with UII's WCE goals.

Leadership's role in fostering external connections also supports quality enhancement. UII has signed memorandums of understanding such as agreements with the Association of Southeast Asian Institutions of Higher Learning (ASAIHL) and similar bodies. Leadership-led delegations participate in joint QA workshops, peer reviews, and benchmarking visits abroad, notably in Malaysia and Australia. These partnerships help UII align QA practices with international best practices. Faculty members involved in these collaborations noted noticeable improvements in their QA documentation and teaching standards. Leadership's efforts in network building add an essential dimension to institutional quality.

Leadership also encourages community and stakeholder engagement in QA efforts. Alumni feedback and industry advisory board input are systematically collected to assess graduate competencies and curricular relevance. According to document analysis, curriculum reviews incorporate external stakeholder suggestions at least once every two years. Leaders respond to local market needs—such as Islamic finance and digital education—by adjusting program focus. Such responsiveness demonstrates a leadership that is data-informed and socially accountable. Stakeholder involvement uplifts QA relevance across disciplines. However, several challenges were identified that constrain leadership effectiveness in QA management. Internal resistance among longtime staff occasionally slows the adoption of new QA protocols such as peer-review and external validation. Some quality initiatives were perceived as top-down edicts rather than co-created improvements. Leadership acknowledges these behavioral constraints and is working to increase change management skills among all units. Workshops on organizational change have been organized to ease transitions. These adaptive measures show leadership's awareness of organizational dynamics and readiness to address them.

Leadership also plays a central role during accreditation periods. Senior leaders coordinate peer review teams to ensure that faculties are well prepared for external QA visits. Throughout the last SPA accreditation (2024–2025), UII leadership provided day-to-day coordination, capacity-building sessions, and real-time guidance. Faculty leaders reported that leadership presence helped reduce stress and clarify procedural aspects. This hands-on support indicates leadership's operational role in critical QA phases. It also points to an evolving leadership style that blends strategy with tactical support. Overall, UII's strategic leadership creates an enabling environment for continuous quality improvement within FIAI [23]. Leadership is clearly vision-driven yet implementation-focused—a balance that is essential in WCE-oriented frameworks. Through systemic policy support, capacity-building measures, technology investment, and stakeholder engagement, leadership translates global ambitions into campus practices. Yet ongoing leadership development remains critical to embed QA as a central institutional habit. These findings highlight that QMS progress at UII is deeply intertwined with adaptive and participatory leadership.

3.2 Quality Management Processes and Stakeholder Engagement at UII

UII's institutional commitment to quality is reflected in its structured Quality Management System (QMS), which follows an annual cycle of continuous improvement. The process begins with strategic planning and stakeholder needs assessment, followed by implementation, monitoring, and evaluation phases [24]. Documentation and analysis of data—including graduation rates, alumni employment, and student satisfaction—

inform periodic internal audits. This systematic approach ensures that quality initiatives are data-driven and aligned with institutional goals. Interviewed QA officers noted that this cycle has enhanced transparency and accountability across faculties. Additionally, the integration of Islamic ethical standards into the QMS framework reinforces UII's unique identity.

A key feature of the QMS is its robust documentation system, which includes standardized operating procedures, audit checklists, and comprehensive evaluation reports. These documents are consistently updated and accessible to all relevant units within the Faculty of Islamic Studies. Leadership and QA staff emphasized that clarity in documentation reduces misinterpretations during audits. Regular training sessions further familiarize staff with QMS protocols and reporting requirements. As a result, faculties report higher preparedness during both internal and external evaluations. Systematic documentation has thus become a backbone of UII's quality assurance. Internal audits are conducted twice annually and involve a mix of internal faculty reviewers and external experts. These auditors assess aspects such as curriculum rigor, student learning outcomes, facility adequacy, and compliance with accreditation standards. Feedback from audit results is shared in consultative forums, ensuring that corrective actions are collaboratively formulated. Interview data indicates that this inclusive audit process cultivates a shared responsibility for quality outcomes. Many faculty members appreciate the use of constructive feedback over punitive measures. Internal audits have thereby fostered a positive quality culture in FIAI.

Student engagement in the quality process is another critical component at UII. Student representatives actively participate in program review committees and curriculum alignment workshops. Their input on academic satisfaction, teaching quality, and learning resources is considered essential. In interviews, students reported that they feel their opinions genuinely shape program enhancements. This participatory approach encourages greater ownership and trust among the academic community. It also enhances the responsiveness of quality management to actual student needs. Alumni and industry stakeholders are also integrated into quality assurance through advisory boards and surveys. Feedback from employers and field supervisors is analyzed to assess graduates' competence and employability. These insights have led to adjustments in course content and practical learning orchestration. For example, partnerships with Islamic financial institutions prompted the incorporation of practical modules in contemporary Islamic finance. QA staff have confirmed that employer engagement enhances curricular quality and alignment with market demands. It also strengthens UII's reputation in national and international job markets.

External accreditation and benchmarking serve as critical milestones within UII's QMS framework. Faculties are evaluated based on national (BAN-PT) and international criteria (e.g., AUN-QA, ISO, AAOIFI). Accreditation preparation involves coordinated training, mock audits, and consulting support. Achieving these recognitions not only affirms quality status but also encourages further improvements. Recent documentation reveals that accredited programs report increased student interest and faculty engagement. National and international audits have thus elevated UII's profile and organizational confidence.

Digital tools and data systems play an instrumental role in supporting quality processes. UII has introduced a quality dashboard that tracks key metrics in real time, such as admission trends, faculty qualifications, and research performance. Interviewed staff affirmed that this dashboard reduces administrative burden and enables prompt decision-making. Data visualizations aid leaders in identifying issues and allocating

resources more effectively. Going forward, UII plans to link the dashboard with Learning Management System data for deeper analysis. This evolution demonstrates UII's commitment to evidence-based quality management [25]. Despite these advances, challenges remain in maintaining stakeholder engagement and cross-departmental coordination. QA staff cited occasional lapses in documentation and inconsistent follow-through on audit recommendations. Language and technological barriers still hinder effective use of digital tools in some units. Respondents recommended enhanced training programs and the establishment of inter-faculty QA working groups. Addressing these challenges is critical to sustain momentum toward WCE. Nonetheless, the overall quality system at UII—anchored by robust processes and stakeholder participation—marks a solid foundation for future growth.

4. Conclusion

Universitas Islam Indonesia (UII) has demonstrated a strong institutional commitment to achieving World Class Education through structured quality management practices, strategic leadership, and inclusive stakeholder engagement. The integration of faith-based values into modern quality frameworks highlights UII's unique identity while aligning with global education standards. Through systematic internal audits, international collaboration, and digital innovations, UII continues to improve transparency, responsiveness, and performance. Despite facing challenges such as resource limitations and uneven stakeholder participation, the university's proactive strategies and culture of continuous improvement position it favorably for long-term global competitiveness.

5. Acknowledgments

The authors would like to express their sincere thanks to their colleagues for their valuable feedback and support throughout the course of this research. Their constructive suggestions greatly contributed to the quality of this work. Appreciation is also extended for the collaborative spirit that enriched the research process.

6. Declaration

Author contributions and responsibilities - The authors made major contributions to the conception and design of the study. The authors took responsibility for data analysis, interpretation and discussion of results. The authors read and approved the final manuscript.

Funding - This research did not receive external funding.

Availability of data and materials - All data is available from the author.

Competing interests - The authors declare no competing interests.

Did you use generative AI to write this manuscript? - I do not use AI assistance in my manuscript.

Declaration of generative AI and AI-assisted technologies in the writing process - During the preparation of this work the author did not use AI to write, edit, or other things related to the manuscript.

7. References

- [1] S. L. Robertson, "V-charged: powering up the world-class university as a global actor," *Globalisation, Societies and Education*, vol. 20, no. 4, pp. 423–434, Aug. 2022, doi: 10.1080/14767724.2022.2065970.

- [2] G. Grgić, “Redefining NATO’ s Indo-Pacific partnerships: cooperative security meets collective defence and deterrence,” *Asian Security*, vol. 20, no. 1, pp. 39–55, Jan. 2024, doi: 10.1080/14799855.2024.2339213.
- [3] M. N. I. Saleh, “Perceptions of pesantren leaders towards Islamic moderation approaches in combating radicalism and terrorism,” *Cogent Arts & Humanities*, vol. 12, no. 1, p. 2474826, Dec. 2025, doi: 10.1080/23311983.2025.2474826.
- [4] A. Malik, “New variants of ultra-conservative Islamic schools in Indonesia: A study on Islamic school endeavor with Islamic group movement,” *Power and Education*, vol. 16, no. 1, pp. 14–28, Mar. 2024, doi: 10.1177/17577438231163042.
- [5] R. Naveed Bin Rais, M. Rashid, M. Zakria, S. Hussain, J. Qadir, and M. A. Imran, “Employing Industrial Quality Management Systems for Quality Assurance in Outcome-Based Engineering Education: A Review,” *Education Sciences*, vol. 11, no. 2, Art. no. 2, Feb. 2021, doi: 10.3390/educsci11020045.
- [6] S. U. E. L. Naqvi and F. Naz, “Quality Leaders’ Journey: An Exploratory Discussion From Pakistani Universities Employing Total Quality Management Approaches Through Quality Enhancement Cells,” *SAGE Open*, vol. 15, no. 2, p. 21582440251340560, Apr. 2025, doi: 10.1177/21582440251340560.
- [7] N. T. T. Pham, C. H. Nguyen, H. T. Pham, and H. T. T. Ta, “Internal Quality Assurance of Academic Programs: A Case Study in Vietnamese Higher Education,” *SAGE Open*, vol. 12, no. 4, p. 21582440221144419, Oct. 2022, doi: 10.1177/21582440221144419.
- [8] H. M. Aji, M. M. Husin, A. K. Othman, A. Hidayat, and W. E. Wan Rashid, “Religious-based ethics and buy-now-pay-later re-usage intention among Muslim consumers in Indonesia and Malaysia: a commitment-trust theory perspective,” *Cogent Business & Management*, vol. 11, no. 1, p. 2363441, Dec. 2024, doi: 10.1080/23311975.2024.2363441.
- [9] R. V. Salomo and K. P. Rahmayanti, “Progress and Institutional Challenges on Local Governments Performance Accountability System Reform in Indonesia,” *SAGE Open*, vol. 13, no. 4, p. 21582440231196659, Oct. 2023, doi: 10.1177/21582440231196659.
- [10] L. T. Nguyen, G. Taylor, P. Gibson, and R. Gordon, “Advancing a critical social psychological perspective on women’s leadership: A case illustration from the Global South,” *Applied Psychology*, vol. 72, no. 1, pp. 126–143, 2023, doi: 10.1111/apps.12383.
- [11] L. Shao and H. Rose, “Teachers’ experiences of English-medium instruction in higher education: a cross case investigation of China, Japan and the Netherlands,” *Journal of Multilingual and Multicultural Development*, vol. 45, no. 7, pp. 2801–2816, Aug. 2024, doi: 10.1080/01434632.2022.2073358.
- [12] A. C. Kadikilo, P. Nayak, and A. Sahay, “Implications of research funding and institutional autonomy policies on faculty research performance in Tanzania’s higher education institutions,” *Cogent Education*, vol. 12, no. 1, p. 2476299, Dec. 2025, doi: 10.1080/2331186X.2025.2476299.
- [13] P. Spieth, T. Röth, T. Clauss, and C. Klos, “Technological Frames in the Digital Age: Theory, Measurement Instrument, and Future Research Areas,” *Journal of Management Studies*, vol. 58, no. 7, pp. 1962–1993, 2021, doi: 10.1111/joms.12720.
- [14] W. M. Lim, “What Is Qualitative Research? An Overview and Guidelines,” *Australasian Marketing Journal*, vol. 33, no. 2, pp. 199–229, May 2025, doi: 10.1177/14413582241264619.
- [15] L. Fonseca, A. Amaral, and J. Oliveira, “Quality 4.0: The EFQM 2020 Model and Industry 4.0 Relationships and Implications,” *Sustainability*, vol. 13, no. 6, Art. no. 6, Jan. 2021, doi: 10.3390/su13063107.
- [16] L. Shee Weng, “Circular Economy in Action: Case Studies of Transformative Supply Chain Practices,” Nov. 14, 2024, *Social Science Research Network*, Rochester, NY: 5152884. doi: 10.2139/ssrn.5152884.
- [17] A. Aldoseri, K. N. Al-Khalifa, and A. M. Hamouda, “Re-Thinking Data Strategy and Integration for Artificial Intelligence: Concepts, Opportunities, and Challenges,” *Applied Sciences*, vol. 13, no. 12, Art. no. 12, Jan. 2023, doi: 10.3390/app13127082.
- [18] I. Finefter-Rosenbluh and J. Wilkinson, “‘It’s a financial decision’: students’ ethical understandings of non-government faith-based schooling in a neoliberal society,” *Educational Review*, vol. 77, no. 4, pp. 1065–1084, Jun. 2025, doi: 10.1080/00131911.2023.2254513.
- [19] Z. Hong and K. Xiao, “Digital economy structuring for sustainable development: the role of blockchain and artificial intelligence in improving supply chain and reducing negative environmental impacts,” *Sci Rep*, vol. 14, no. 1, p. 3912, Feb. 2024, doi: 10.1038/s41598-024-53760-3.

- [20] J. Ominyi, A. Nwedu, D. Agom, and U. Eze, "Leading evidence-based practice: nurse managers' strategies for knowledge utilisation in acute care settings," *BMC Nurs*, vol. 24, no. 1, p. 252, Mar. 2025, doi: 10.1186/s12912-025-02912-5.
- [21] E. Hodson *et al.*, "Evaluating Social Impact of Smart City Technologies and Services: Methods, Challenges, Future Directions," *Multimodal Technologies and Interaction*, vol. 7, no. 3, Art. no. 3, Mar. 2023, doi: 10.3390/mti7030033.
- [22] C. Wijethilake, B. Upadhaya, and T. Lama, "The role of organisational culture in organisational change towards sustainability: evidence from the garment manufacturing industry," *Production Planning & Control*, vol. 34, no. 3, pp. 275–294, Feb. 2023, doi: 10.1080/09537287.2021.1913524.
- [23] A. Bentri, A. Hidayati, and M. Kristiawan, "Factors supporting digital pedagogical competence of primary education teachers in Indonesia," *Front. Educ.*, vol. 7, Nov. 2022, doi: 10.3389/educ.2022.929191.
- [24] L. Biondi and S. Russo, "Integrating strategic planning and performance management in universities: a multiple case-study analysis," *J Manag Gov*, vol. 26, no. 2, pp. 417–448, Jun. 2022, doi: 10.1007/s10997-022-09628-7.
- [25] C. Alberti, A. Civera, E. E. Lehmann, M. Meoli, J. Otto, and S. Paleari, "University sustainability rankings: a critical literature review on the UI GreenMetric ranking system," *J Technol Transf*, May 2025, doi: 10.1007/s10961-025-10223-9.

Publisher's Note – Tinta Emas Institute stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.