

Strategy for Improving Higher Education Quality Through Indexed Scientific Publications Based on Key Performance Indicators

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Abstract

This study examines strategies for improving higher education quality through indexed scientific publications based on Key Performance Indicators (KPIs) at Universitas Bhinneka Nusantara (UBHINUS). Despite the growing importance of indexed publications in evaluating university performance, studies on publication improvement strategies in private universities undergoing institutional transformation remain limited. This study aims to analyze the current publication performance at UBHINUS, identify strategies for improving indexed scientific publications, examine supporting and inhibiting factors, and propose a higher education quality improvement framework. UBHINUS was selected because it is a private university undergoing institutional transformation while striving to improve research productivity and accreditation. This qualitative study involved 10 purposively selected informants consisting of university leaders, lecturers, LPPM staff, Global Partnership Unit representatives, and students. Data were collected through interviews, observations, and document analysis and analyzed using ATLAS.ti 9. The findings indicate that publication performance has not yet been optimal due to limited international publications, weak research culture, insufficient collaboration, and low student involvement. Leadership commitment, strategic planning, funding support, and LPPM play important roles in improving publication productivity. Based on these findings, this study proposes a Living Lab-based collaborative research framework to strengthen the research ecosystem and enhance institutional quality.

Keywords

Key Performance Indicators (KPIs); Living Lab; Strategic Management; Indexed Publications; Higher Education

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1. INTRODUCTION

Higher education institutions play a strategic role in generating knowledge, innovation, and human capital that contribute to national development and global competitiveness. In Indonesia, this role has been strengthened through the implementation of Key Performance Indicators (KPIs/IKU), which emphasize measurable institutional performance in education, research, innovation, collaboration, and governance. Scientific publications indexed in reputable international databases have become one of the principal indicators for evaluating university performance, supporting accreditation, and enhancing institutional competitiveness. International ranking systems, including the Times Higher Education, QS World University Rankings, and Academic Ranking of World Universities, also use research productivity, citations, and international research impact as important evaluation



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indicators (Hazelkorn, 2015).

Indonesia has experienced substantial growth in Scopus-indexed scientific publications over the past decade and is recognized as one of the leading contributors to scientific publications in Southeast Asia according to the SCImago Journal & Country Rank, which is based on Scopus data. Nevertheless, publication productivity remains uneven across Indonesian higher education institutions, particularly among private universities, where limitations in research capacity, funding, international collaboration, and institutional research governance continue to affect publication performance. Previous studies further demonstrate that research productivity and scientific publications are positively associated with institutional quality assurance, accreditation outcomes, and global competitiveness (Bland, 2005). Therefore, strengthening publication performance has become an essential strategy for achieving Key Performance Indicators (KPIs) while simultaneously improving institutional accreditation and long-term competitiveness.

Despite the increasing importance of indexed scientific publications, previous studies have mainly examined research productivity or accreditation independently (Bland, 2005). Limited attention has been given to how publication strategies can be integrated with the achievement of Key Performance Indicators (KPIs), particularly in private universities undergoing institutional transformation. Universitas Bhinneka Nusantara (UBHINUS) represents an appropriate case because it is currently strengthening its research governance and publication performance following its transformation from STIKI Malang into a university. Therefore, this study aims to analyze institutional strategies for improving indexed scientific publications based on KPIs, identify the supporting and inhibiting factors, and propose a strategic framework for improving higher education quality through scientific publications.

Accreditation is one of the main instruments used to assess the quality of higher education institutions. In Indonesia, accreditation is conducted by the National Accreditation Board for Higher Education and Independent Accreditation Agencies according to scientific fields. This study focuses on Universitas Bhinneka Nusantara, formerly known as STIKI Malang. The transformation from a college into a university represents a strategic effort to improve academic quality, expand study programs, and strengthen competitiveness. However, this transformation also creates challenges for UBHINUS, especially in achieving Key Performance Indicators (IKU) related to research and scientific publications.

Research and scientific publication are important responsibilities for lecturers as part of the Tri Dharma of Higher Education. Publications are not only academic outputs but also indicators of institutional quality and reputation (Cossani et al., 2022). Based on observations conducted at UBHINUS in 2025, most lecturer publications are still categorized in SINTA 4 and SINTA 5, while international indexed publications remain limited. In addition, collaboration between lecturers and students in research activities is still relatively low. Another issue is that the Research and Development Master Plan (RIP) still uses old data and has not been updated according to current institutional developments. These conditions indicate that a more systematic strategy is needed to improve scientific publication productivity and university quality.

Previous studies have examined scientific publication from various perspectives, Suryaningsum emphasized scientific publications as indicators of university performance, while Iskandar et al. highlighted institutional strategies, including research roadmaps, management support, and collaboration, to improve publication productivity. Other studies by Ndiango et al., Holý, and Wahid et al. identified organizational, governance, funding, and collaboration factors as determinants of publication performance. Meanwhile, Gomis et al., Usman et al., and Attree emphasized the importance of collaboration, strategic management, and quality assurance in strengthening higher education performance. These studies demonstrate that scientific publication is closely related to institutional competitiveness and quality improvement.

However, previous studies have generally examined publication productivity, research

governance, accreditation, and quality assurance separately. Limited attention has been given to integrating Key Performance Indicators (KPIs/IKU), indexed scientific publications, and institutional accreditation into a comprehensive strategy, particularly in private universities undergoing institutional transformation. Therefore, this study contributes by proposing an integrated governance framework that combines these three dimensions and introduces a Living Lab-based collaborative approach to strengthen research governance and publication performance at Universitas Bhinneka Nusantara (UBHINUS).

The concept of educational management is an important foundation in understanding how higher education institutions achieve their goals effectively and efficiently. Educational management refers to the process of organizing human and non-human resources systematically to achieve educational objectives (Siswanto et al., 2024). According to Terry, management consists of four main functions: planning, organizing, actuating, and controlling. In the context of higher education, these functions are closely related to the implementation of the Tri Dharma of Higher Education, namely education, research, and community service. Effective educational management enables universities to improve institutional performance, strengthen academic culture, and maintain competitiveness in the era of globalization. Therefore, higher education management is not only focused on administrative activities but also on strategic efforts to improve institutional quality and academic reputation.

This study uses the grand theory of Quality Management in Higher Education proposed by Siswanto et al. (2024), which emphasizes continuous improvement and the involvement of all institutional stakeholders in achieving educational quality. The theory is supported by the Total Quality Management (TQM) approach developed by Deming (1986) and Juran (1995) through the Plan–Do–Check–Act (PDCA) cycle (Iqbal, 2024). In higher education, quality management is closely connected to accreditation, research productivity, and scientific publications as indicators of institutional performance. Scientific publication has become an important benchma

rk in assessing university competitiveness and reputation at national and international levels. According to Cossani et al. (2022), publication productivity reflects the academic performance and research quality of a university. Therefore, universities need structured quality management systems to support research culture, improve publication quality, and achieve institutional accreditation standards.

Based on the identified research gaps, this study aims to analyze the current publication performance at Universitas Bhinneka Nusantara (UBHINUS), identify institutional strategies for improving indexed scientific publications based on Key Performance Indicators (KPIs), examine the supporting and inhibiting factors affecting publication performance, and propose a Living Lab-based collaborative governance framework to strengthen research governance, improve publication productivity, support institutional accreditation, and enhance higher education quality.

2. METHODS

This study employed a qualitative case study approach to analyze strategies for improving higher education quality through indexed scientific publications based on Key Performance Indicators (KPIs) at Universitas Bhinneka Nusantara (UBHINUS), as it focuses on an in-depth investigation of a single institution. The research was conducted at Universitas Bhinneka Nusantara (formerly STIKI Malang) from January to April 2025, during its institutional transformation that requires improvement in research productivity, publication performance, and accreditation outcomes. Informants were selected using purposive sampling based on their roles in research governance and publication activities at Universitas Bhinneka Nusantara (UBHINUS). The study involved 20 informants: the Rector (P1), Vice Rector for Academic Affairs (P2), Vice Rector for Finance (P3), Head of the Quality Assurance Unit (P4), Head of LPPM (P5), Head of Global Partnership (P6), seven lecturers (D1–D7), five students (M1–M5),

and one LPPM staff member (T1). These informants were selected because they were directly involved in research management, publication, and quality assurance. Data sources consisted of primary data (interviews and observations) and secondary data (strategic plans, reports, accreditation documents, publication data, and research performance reports). Data were collected through observation, semi-structured interviews, and documentation. Data were analyzed using the Spradley model supported by ATLAS.ti 9 through coding, categorization, theme development, network analysis, and interpretation. Data validity was ensured through source, method, and document triangulation.

3. FINDINGS AND DISCUSSIONS

Findings

Existing Condition of Publication Performance

The findings indicate that indexed scientific publications have become one of the strategic priorities of Universitas Bhinneka Nusantara (UBHINUS) following its institutional transformation from STIKI Malang into a university. Document analysis revealed that publication performance has been integrated into the university's Strategic Plan (Renstra), Annual Work Plan (RKT), Annual Budget Plan (RKAT), and Key Performance Indicators (KPIs). These institutional documents demonstrate that publication productivity is recognized as an important performance indicator for improving higher education quality, supporting accreditation, and strengthening institutional competitiveness.



Figure 1. Trends in Lecturers' Scientific Publications Following the Implementation of LPPM Research Support Programs (2009–2014)

Institutional publication records indicate a substantial improvement in lecturers' publication performance following the strengthening of LPPM research support programs. As shown in Figure 1, national publications increased from 7 articles in 2012 to 18 articles in 2013, while international publications, which were previously absent during 2009–2013, reached 14 articles in 2014. This improvement coincided with the implementation of several LPPM initiatives, including publication mentoring, internal research grants, manuscript review, publication funding assistance, and continuous monitoring of research outputs. Although this study does not establish a direct causal relationship, the increasing trend suggests that the strengthening of LPPM programs contributed to improving research productivity and the university's indexed scientific publication performance.

Interview findings further confirmed that publication performance is no longer viewed solely as an academic responsibility but has become part of institutional governance. Informant P1 explained that indexed scientific publications are considered one of the university's strategic priorities because they contribute to institutional reputation, accreditation, and the achievement of Key Performance Indicators

(KPIs). Similarly, Informant P2 emphasized that publication targets have been incorporated into academic planning and lecturer performance evaluation to encourage continuous improvement in research productivity. These findings indicate a strong commitment from university leadership to integrating publication performance into institutional quality management.

The analysis also showed that publication achievement is monitored periodically through the university's quality assurance system. This monitoring process enables institutional leaders to evaluate research performance, identify challenges, and formulate strategic improvements. Therefore, the existing condition at UBHINUS demonstrates that publication performance has evolved from an individual academic activity into an institutional strategy for strengthening research governance and improving higher education quality.

Institutional Strategies for Improving Indexed Scientific Publications

The findings reveal that Universitas Bhinneka Nusantara has implemented several institutional strategies to improve publication performance. These strategies include strengthening research governance, providing internal research grants, publication mentoring, manuscript review, publication funding assistance, collaboration with external partners, and continuous monitoring of research outputs through the Institute for Research and Community Service (LPPM). The implementation of these strategies reflects the university's commitment to improving research productivity while supporting institutional accreditation and the achievement of Key Performance Indicators (KPIs).

Interview results indicate that publication mentoring is one of the most influential strategies implemented by the university. Informants explained that mentoring programs assist lecturers in selecting appropriate journals, improving manuscript quality, responding to reviewers' comments, and completing the publication process. In addition, internal research grants encourage lecturers to conduct research with greater publication potential, while collaboration with national and international partners expands research networks and publication opportunities.

Document analysis further confirms that these strategies are integrated into institutional planning and performance evaluation. Publication achievements are regularly monitored and evaluated to ensure consistency with institutional targets and continuous quality improvement. This integrated strategy demonstrates that publication performance is managed systematically through collaboration between university leaders, LPPM, lecturers, students, and supporting units.

The Strategic Role of LPPM in Improving Publication Performance

The findings indicate that the Institute for Research and Community Service (LPPM) plays a central role in strengthening publication performance at Universitas Bhinneka Nusantara (UBHINUS). Interview results revealed that LPPM is responsible for coordinating research governance through internal research grants, publication mentoring, manuscript review, publication funding assistance, and continuous monitoring of research outputs. These initiatives are designed to improve lecturers' and students' research capacity while supporting the achievement of Key Performance Indicators (KPIs), institutional accreditation, and higher education quality.

Several informants emphasized that publication mentoring has become one of the most effective programs implemented by LPPM. According to Informant P5, publication assistance does not only focus on manuscript preparation but also supports researchers in selecting appropriate journals, responding to reviewers' comments, and completing the publication process. Lecturers (D1–D7) further explained that internal funding schemes and publication mentoring have increased their motivation and confidence to publish in indexed journals. These findings suggest that LPPM functions not only as an administrative unit but also as a facilitator of research capacity development and publication performance.

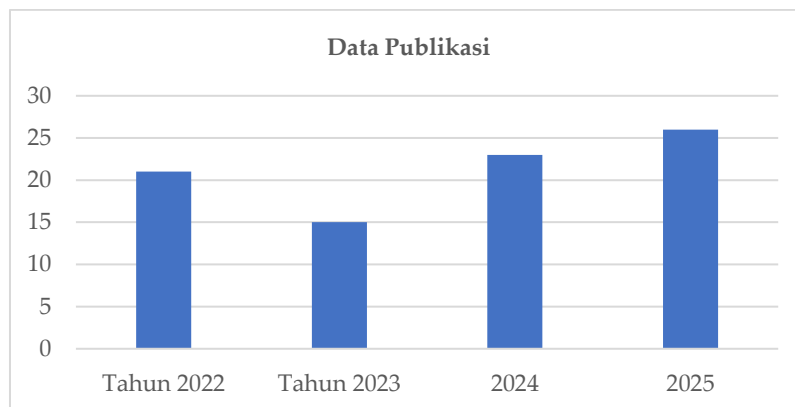


Figure 2. Trend of Indexed Scientific Publications at Universitas Bhinneka Nusantara (2022–2025)

Source: Institute for Research and Community Service (LPPM), Universitas Bhinneka Nusantara (2025)

Institutional publication records further support the interview findings. As presented in Figure 1, the number of indexed scientific publications reached 21 articles in 2022, declined to 15 articles in 2023, and subsequently increased to 23 articles in 2024 and 26 articles in 2025. The increasing trend observed in 2024 and 2025 coincided with the strengthening of LPPM publication support programs, including publication mentoring, internal research grants, manuscript assistance, and publication monitoring. Although this study does not claim a direct causal relationship, the consistent improvement in publication output alongside these institutional initiatives indicates that LPPM has made a substantial contribution to strengthening research productivity at UBHINUS.

The integration of publication mentoring, research funding, institutional monitoring, and collaboration has enabled UBHINUS to establish a more systematic research governance mechanism. These findings demonstrate that strengthening LPPM is not only associated with improved publication productivity but also supports institutional quality improvement through the achievement of research performance indicators, accreditation targets, and Key Performance Indicators (KPIs). Therefore, LPPM serves as a strategic driver in promoting sustainable publication performance within the university.

Supporting and Inhibiting Factors

The findings reveal that the improvement of indexed scientific publications at Universitas Bhinneka Nusantara (UBHINUS) is influenced by several supporting and inhibiting factors. Interview results indicate that strong leadership commitment, institutional research funding, publication mentoring, collaborative research, and supportive institutional policies are the primary factors contributing to publication performance. Informants explained that continuous encouragement from university leaders and the active role of LPPM have created a supportive research environment, enabling lecturers and students to increase their participation in scientific publications.

In addition to institutional support, collaboration with national and international partners was identified as an important factor in improving publication quality and expanding research networks. Informants emphasized that collaborative research provides opportunities to enhance research quality, exchange knowledge, and increase the likelihood of publishing in indexed journals. Furthermore, publication workshops, manuscript review, and mentoring programs have improved researchers' understanding of publication standards and the manuscript submission process.

Despite these supporting factors, several challenges remain. Informants reported that heavy teaching workloads, limited time for research, publication costs, and differences in research competence among lecturers continue to hinder publication productivity. Some lecturers also highlighted the difficulty of meeting the quality standards required by reputable indexed journals, particularly in preparing manuscripts in English and responding to reviewers' comments. These findings indicate that improving publication performance requires not only institutional support but also continuous capacity

building and sustainable research management to address these challenges.

Living Lab-Based Collaborative Governance Framework

Based on the findings, this study proposes a Living Lab-based collaborative governance framework as a strategy for improving indexed scientific publications and higher education quality at Universitas Bhinneka Nusantara (UBHINUS). The framework integrates the roles of university leadership, the Institute for Research and Community Service (LPPM), the Quality Assurance Unit, lecturers, students, and external partners in creating a collaborative research ecosystem that supports sustainable publication performance.

The proposed framework emphasizes four interrelated components. First, institutional governance, which includes strategic planning, leadership commitment, and the integration of publication targets into Key Performance Indicators (KPIs). Second, research capacity development, implemented through publication mentoring, internal research grants, manuscript assistance, and publication workshops coordinated by LPPM. Third, collaborative research and networking, which encourages partnerships with national and international institutions to improve research quality and publication opportunities. Fourth, continuous monitoring and evaluation, conducted through institutional performance reviews and publication monitoring to ensure the sustainability of research productivity and accreditation achievement.

The Living Lab-based collaborative governance framework reflects a participatory approach in which all stakeholders contribute to improving research governance and publication performance. Unlike conventional publication management that primarily focuses on individual researcher performance, this framework integrates institutional policies, collaborative learning, and continuous evaluation within a single governance system. Therefore, the proposed framework not only strengthens publication productivity but also supports institutional accreditation, enhances higher education quality, and contributes to the long-term competitiveness of private universities undergoing institutional transformation.

Research Findings Analysis

This research was analyzed using ATLAS.ti 9 as a qualitative data analysis software to support the process of organizing, coding, and visualizing interview data. The use of this software aimed to assist the researcher in managing data systematically and efficiently, so that the findings could be interpreted more clearly and comprehensively. The informants involved in this study consisted of 10 participants, including the Rector, Vice Rector I for Academic Affairs, Vice Rector II for Finance, Dean, Head of LPPM, lecturers, Global Partnership Unit, LPPM staff, and students at Universitas Bhinneka Nusantara (UBHINUS). Based on the analysis process using ATLAS.ti 9, the interview data were processed through several stages, namely adding documents, coding, and data visualization.

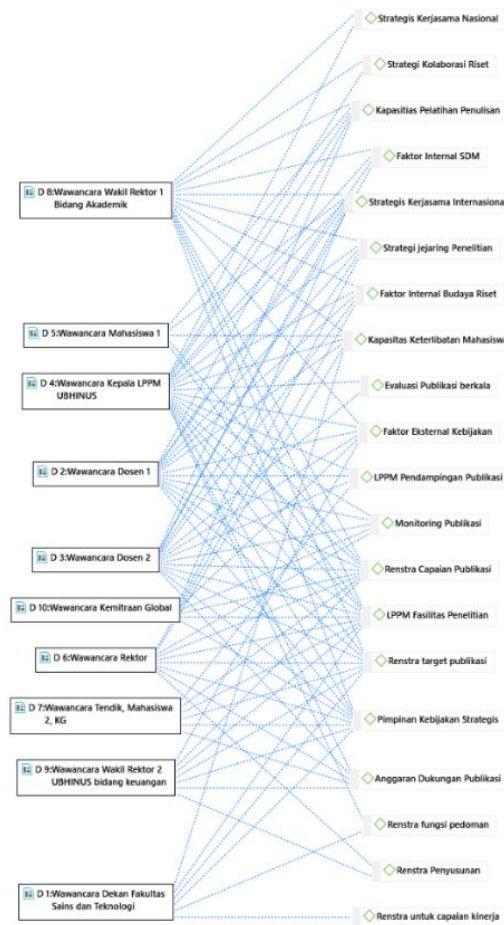


Figure 3. Data Visualization Results

1. Improving UBHINUS Quality through Indexed Scientific Publications Based on IKU

The findings show that improving UBHINUS quality through indexed scientific publications is influenced by institutional policies, leadership commitment, and the role of LPPM. The Strategic Plan (Renstra) functions as a guideline for publication targets and institutional quality improvement. Leadership commitment is reflected through publication policies, research support, and academic programs that encourage publication productivity. That publication support at UBHINUS is implemented through research grants, publication mentoring, funding assistance, and publication monitoring managed by LPPM. These programs aim to increase research productivity and publication output among lecturers and students. However, several challenges remain, including differences in research readiness, publication skills, academic workload, and the limited continuity of mentoring programs. Although institutional support is available, improvements in implementation and sustainable assistance are still needed.

2. Strategies to Increase Indexed Scientific Publications

The findings indicate that UBHINUS improves publication performance through research collaboration, national and international partnerships, training, and publication monitoring. The strategies implemented by UBHINUS, including lecturer-student collaboration, research partnerships, scientific writing workshops, and publication evaluation programs. LPPM and the Global Partnership Unit also support publication internationalization through collaborative research and seminars. Nevertheless, several lecturers stated that opportunities for international collaboration are still limited and not equally accessible. Some students also reported limited involvement in collaborative research activities. Therefore, stronger implementation and wider participation are still required.

3. Supporting and Inhibiting Factors in Increasing Scientific Publications

The findings show that institutional policies, leadership commitment, LPPM support, and collaboration networks are the main supporting factors for publication improvement. Publication monitoring and evaluation systems also support IKU achievement. The supporting and inhibiting factors affecting scientific publication performance at UBHINUS. Supporting factors include institutional policy support, leadership commitment, research facilities, and external collaboration networks. Inhibiting factors include unequal lecturer motivation, high academic workload, weak research culture, and limited mentoring continuity. External factors such as government IKU policies and inter-university competition also influence publication performance. Although government regulations encourage research productivity, high publication targets create challenges related to institutional readiness and resource availability.

Discussion of Research Findings

Theoretical Analysis: TQM and PDCA Perspectives on Publication Governance

The findings on strategic planning, budgeting, and LPPM's coordinating role can be further interpreted through Total Quality Management (TQM) and the Plan-Do-Check-Act (PDCA) cycle, two frameworks widely used to explain continuous institutional improvement ((Iqbal, 2024)). TQM rests on principles of continuous improvement, process-based management, top-management commitment, and most importantly organization-wide employee involvement across all functional units, not only a single coordinating office (Deming, 1986).

Mapped onto the PDCA cycle, the UBHINUS findings show the following pattern: the Plan stage is represented by the Renstra, the RKT/RKAT, and IKU publication targets; the Do stage is represented by LPPM's programs of research grants, training, mentoring, and publication assistance; the Check stage is represented by the monitoring and evaluation activities carried out by LPPM and university leadership; and the Act stage should consist of follow-up actions such as policy revision, incentive redesign, or renewed capacity building based on evaluation results.

The findings partially support TQM and PDCA in that UBHINUS has formally established all four stages and has embedded quality targets into a structured planning-budgeting cycle, which is consistent with a process-oriented, top-management-driven approach to quality. However, the findings also point to two contradictions with these frameworks. First, TQM requires quality responsibility to be distributed across the whole organization, whereas at UBHINUS, publication planning, budgeting, and evaluation are concentrated almost entirely within LPPM, with limited involvement from academic units and study programs. Second, the PDCA cycle at UBHINUS appears incomplete: the findings indicate that monitoring and evaluation activities "require stronger follow-up actions," meaning the cycle largely stops at Check and does not consistently close into a corrective Act stage. An incomplete PDCA loop weakens continuous improvement, since evaluation results are not systematically translated into revised policy or targeted intervention. This suggests that UBHINUS has adopted the structural elements of TQM and PDCA without yet operationalizing their underlying principles of shared ownership and closed-loop correction, and that strengthening the Act stage and distributing quality responsibility beyond LPPM are necessary conditions for these frameworks to function as intended.

KPIs (IKU) Directly Related to Scientific Publications and Their Contribution to Higher Education Quality

Among the eight Key Performance Indicators (IKU) used in the Indonesian higher education performance framework, publication performance at UBHINUS is most directly represented by IKU 5 (lecturers' work is used by society or receives international recognition), which explicitly captures indexed publications, citations, and other forms of scholarly recognition. Two further indicators contribute indirectly but substantively: IKU 3 (lecturers' activities outside the campus), which

frequently generates joint research and co-authored publications through external collaboration, and IKU 6 (partnerships with leading/world-class institutions), which is a common channel through which international co-publications are produced. IKU 7 (collaborative and case-based learning) contributes more indirectly by involving students in research activities that can later be converted into student-co-authored publications.

These indicators contribute to institutional quality in higher education in three interrelated ways. First, they function as a proxy for research productivity and academic reputation, which are weighted components of national accreditation instruments (BAN-PT/LAMDIK) and institutional ranking systems. Second, they operationalize the tridharma of higher education by linking research output back to teaching quality, since research-active lecturers are expected to bring current, evidence-based content into the classroom. Third, achievement on IKU 5, IKU 3, and IKU 6 signals institutional legitimacy to external stakeholders prospective students, government evaluators, and collaboration partners which in turn affects competitiveness. The findings of this study indicate that UBHINUS's current publication effort is concentrated on satisfying the minimum threshold of IKU 5 through national (SINTA-indexed) publications, with comparatively limited attention to IKU 3 and IKU 6 as complementary pathways. Consequently, the institution captures partial credit on the publication-related IKUs rather than the fuller contribution to quality that would result from an integrated strategy across all three indicators.

Leadership, Motivation, and Commitment

The research findings indicate that leadership motivation strongly affects organizational culture, particularly academic and research culture. Leaders with strong commitment tend to create supportive environments that encourage innovation, collaboration, and scientific productivity. The commitment of UBHINUS leadership is reflected in policies supporting research capacity development, publication incentives, and research facilities. According to Marin-Rodriguez et al. (2025), strategy refers to long-term plans designed to achieve organizational objectives and maintain competitiveness. In the context of higher education, institutional leaders must establish clear strategies to improve publication performance and institutional quality. Effective strategic management allows universities to align planning, implementation, and evaluation processes toward achieving academic excellence. Therefore, leadership commitment is essential not only in policy formulation but also in ensuring consistent implementation and institutional support for research and publication activities.

Capacity Building for Lecturers and Students

Lecturers and students are the primary actors in higher education implementation. Universities play strategic roles in developing competitive human resources capable of adapting to global developments. Therefore, improving the capacity of lecturers and students is essential for enhancing research productivity and scientific publication outcomes. Research findings indicate that capacity-building efforts at UBHINUS are implemented through training programs, workshops, and scientific writing assistance for lecturers and students. However, the Head of LPPM acknowledged that not all lecturers and students possess the same level of readiness and capability in participating in such programs, resulting in uneven outcomes. From the perspective of higher education governance, academic capacity development should not only focus on individual competence but also on collaborative academic ecosystems (Marginson, 2011). Becker (1993) concept of human capital emphasizes that investment in individuals increases productivity. In higher education, this productivity becomes more effective when collaborative interactions between lecturers and students are strengthened through research activities. Research capacity building also requires practical collaboration opportunities rather than merely formal policies. Fraser (2006) argue that collaborative research activities significantly contribute to academic capacity development. The involvement of students in lecturers' research projects not only improves students' research skills but also accelerates scientific publication productivity. Therefore, lecturer performance indicators should include collaborative publication activities involving students, particularly publications indexed

internationally. Such policies would support research-based learning, strengthen academic sustainability, and improve institutional publication performance simultaneously.

Supporting and Inhibiting Factors in Increasing Indexed Scientific Publications

Internal Factors Affecting Publication Output

Based on the research findings, internal factors play an important role in influencing the number of indexed scientific publications at UBHINUS. These factors include institutional management support, research facilities, and the monitoring and evaluation system conducted by the LPPM and university leadership. According to Philip G. Altbach, the quality of academic output is strongly influenced by internal governance, academic culture, and research support systems (Sayidah et al., 2019). The Vice Rector for Academic Affairs explained that the university has encouraged lecturers to actively conduct research and publish scientific articles through academic policies and institutional support. In addition, LPPM provides research grants, publication assistance, training, and mentoring programs. This reflects the concept of organizational support theory proposed by Eisenberger et al., which states that organizational support can improve individual motivation and performance. However, several challenges still exist. Some lecturers face limitations related to workload, time management, and research readiness, resulting in the underutilization of available facilities and programs. Monitoring and evaluation activities also require stronger follow-up actions to improve publication productivity consistently. Therefore, UBHINUS needs to strengthen research culture, improve lecturer capacity, and optimize the implementation of evaluation results to support sustainable publication growth.

External Factors Affecting Publication Output

External factors also significantly influence the improvement of indexed scientific publications at UBHINUS. These factors include government policies through the Main Performance Indicators (IKU), competition among universities, and external collaboration networks. In institutional theory, DiMaggio & Powell explain that organizations adapt to external pressures in order to gain legitimacy and competitiveness. The implementation of IKU policies has encouraged universities to improve the quality and quantity of scientific publications. However, not all study programs are equally prepared to achieve these targets. As a private university, UBHINUS also faces competition with institutions that have stronger research resources and reputations. To address these challenges, UBHINUS has expanded collaboration with national and international partners through joint research and publication activities. This strategy aligns with network theory proposed by Castells, which emphasizes the importance of collaboration networks in improving innovation and productivity. Therefore, strengthening partnerships and adapting to external policies are essential strategies for increasing publication performance sustainably.

Rather than being proposed as a standalone innovation, the Living Lab model offered as the outcome of this study is derived directly from the theoretical framework used throughout the discussion TQM, the PDCA cycle, institutional theory, organizational support theory, human capital theory, and network theory and is built incrementally from the empirical findings on planning, budgeting, LPPM's role, leadership, capacity building, and the internal/external factors identified above. In this sense, the Living Lab is not introduced a priori; it is the cumulative, theory-grounded synthesis of the preceding sections.

The development of the model followed a staged, iterative process rather than a single-step design. First, a theoretical study stage consolidated the frameworks above into a coherent set of design principles: closed-loop PDCA correction, organization-wide (not unit-bound) quality responsibility, and structured collaboration networks. Second, a pilot/trial articulation stage mapped these principles onto UBHINUS's actual structures Renstra, RKT/RKAT, LPPM, and existing capacity-building programs to produce an initial draft model. Third, an iterative refinement stage tested this draft against

the study's interview and documentary findings, revising components where the empirical data showed gaps (for example, strengthening the Act stage and adding an explicit academic-unit role that the current structure lacks). Only after this incremental development did the draft stabilize into the institutional model of research results presented in the following section, which is then subjected to expert/informant validation before being finalized.

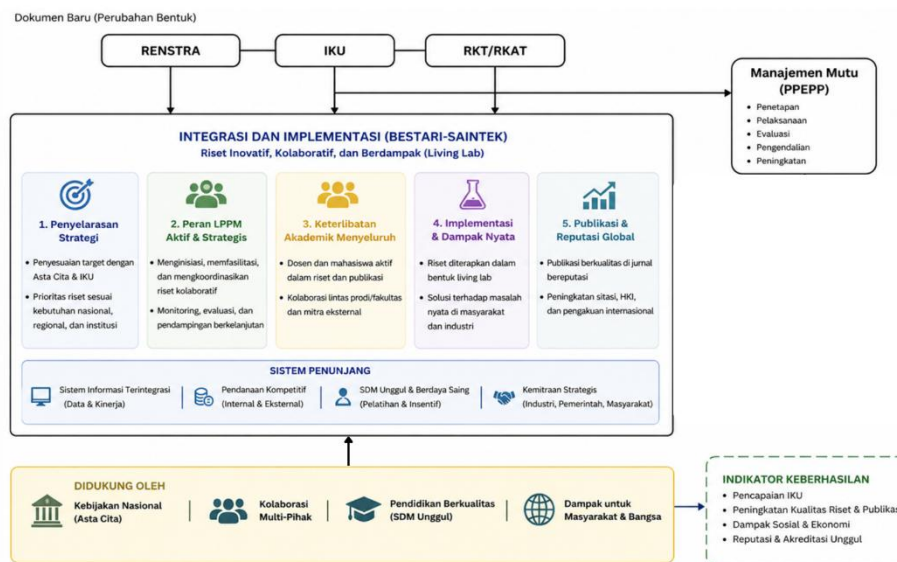


Figure 2. UBHINUS Living Lab Model for Improving Indexed Scientific Publications

4. CONCLUSION

This study concludes that the improvement of indexed scientific publication performance at Universitas Bhinneka Nusantara based on Key Performance Indicators (IKU) is not yet optimal due to limited international publications, weak research culture, limited collaboration, and the absence of an integrated research management system. Leadership commitment, institutional policies, funding support, and the role of LPPM were identified as key factors supporting publication improvement. This study proposes an integrated research publication performance improvement model focusing on strengthening research governance, capacity development, collaboration, institutional support, and continuous evaluation. Theoretically, this study contributes to understanding publication performance improvement in higher education. Practically, the model can guide universities in improving research productivity and publication quality. From a policy perspective, the findings provide input for developing sustainable research policies aligned with IKU. Future research may involve broader institutional contexts and comparative approaches.

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