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Assessing the effectiveness of MISHEQA for internal quality assurance: a multi-stakeholder evaluation

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ABSTRACT

The Higher Education Service Institutes (LLDIKTI) Region VII in Indonesia oversees quality assurance for 334 private higher education institutions (HEIs) in East Java. In 2019, it launched the MISHEQA system to support reporting of Internal Quality Assurance System (IQAS) implementation. However, a major issue arose: 26% of HEIs (88 out of 334 institutions) did not report their IQAS data through MISHEQA in 2021, showing a significant increase compared to 11% (35 out of 318 institutions) in 2020. This study assesses the effectiveness of MISHEQA from multiple stakeholder perspectives using the Technology Acceptance Model (TAM), examining how perceived usefulness and ease of use influenced user acceptance. A qualitative approach was used, combining in-depth interviews, surveys (82 respondents), and FGD with six HEIs, LLDIKTI officials, and quality assurance experts. Thematic analysis was conducted to identify patterns in user experience and system implementation. Three major findings emerged. First, MISHEQA was seen as useful by institutions in the yellow and red clusters, with the reporting and upload features noted as most beneficial. Second, some features were considered redundant: the IQAS document upload feature overlapped with the PPEPP cycle, and the Research and Community Service feature duplicated tracking already conducted via SINTA. Third, findings highlighted the importance of system integration and reducing redundancy in digital quality assurance tools. This study provided valuable feedback to LLDIKTI VII, contributing to the decision to discontinue MISHEQA, which was later replaced by the nationally managed 'Pelaporan SPMI' application by DIKTI (IQAS reporting application).

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1. INTRODUCTION

In Indonesia, the Higher Education Service Institute (Lembaga Layanan Pendidikan Tinggi Indonesia, LLDIKTI) Region VII plays a key role in supporting quality assurance for 334 private higher education institutions (HEIs) in East Java. Since 2018, LLDIKTI has

promoted Internal Quality Assurance System (IQAS) implementation through training, data collection, and the development of the MISHEQA application. MISHEQA was designed to help HEIs manage and report their IQAS activities more efficiently while enabling LLDIKTI to monitor institutional performance and guide accreditation improvements. The two main stakeholders are LLDIKTI and HEI users (university leaders and IQAS implementers), who rely on MISHEQA to assess performance and streamline reporting processes (LLDIKTI VII, 2022).

The quality level of internal quality assurance implementation in higher education under LLDIKTI Region VII is classified into three clusters: green, yellow, and red. In 2020, 61 HEIs (19%) were classified in the Green Cluster with scores between 80 and 100, indicating a high level of quality. However, this number dropped sharply to 27 HEIs (8%) in 2021. Meanwhile, the Yellow Cluster, representing a moderate level of quality with scores ranging from 60 to below 80, consisted of 83 HEIs (26%) in 2020 and increased to 105 HEIs (31%) in 2021. The Red - Reported Cluster, comprising HEIs with lower quality scores (above 0 to below 60), included 139 HEIs (44%) in 2020 and decreased to 114 HEIs (34%) in 2021. Conversely, the number of HEIs in the Red - Not Reported Cluster, indicating no reported score or score of 0, rose from 35 institutions (11%) in 2020 to 88 institutions (26%) in 2021. Overall, the total number of HEIs grew from 318 in 2020 to 334 in 2021. These data reflect notable shifts in the distribution of institutional quality over time, highlighting both progress and setbacks in IQAS implementation and reporting across the region.

Furthermore, this color-based clustering enables LLDIKTI to tailor its interventions and development programs to the specific needs of institutions. For instance, institutions in the Green Cluster may require advanced capacity-building initiatives to sustain and further improve their quality, while those in the Yellow Cluster benefit more from targeted training and technical support to address moderate gaps in IQAS implementation. In contrast, institutions in the Red Cluster require intensive assistance, monitoring, and mentoring to address fundamental challenges in quality assurance. These cluster-specific characteristics influence how institutions engage with MISHEQA, as their expectations, intensity of use, and reliance on the system vary by stage of development. By leveraging this color-coded categorization, LLDIKTI can design more targeted programs to enhance MISHEQA adoption and ensure responsiveness to the diverse needs of higher education institutions.

In 2021, the distribution of Higher Education Institutions (HEIs) across quality clusters, along with the calculated sample size using Slovin's formula and the actual MISHEQA respondents, reflected strong participation. Within the Green Cluster (scores 80–100), 27 HEIs were recorded, with a calculated sample size of 8; however, 9 respondents completed the MISHEQA, representing 113% of the target. In the Yellow Cluster (scores 60–79), 105 HEIs were identified with a sample size of 31, yet 39 respondents participated, exceeding the target by 126%. For the Red – Reported Cluster (scores 1–59), 114 HEIs were listed with a sample size of 34, and all 34 targeted respondents completed the questionnaire, achieving 100%. These outcomes highlight consistently high response rates across clusters, underscoring strong institutional engagement in the evaluation process.

Based on the explanation above, a key problem emerged that many HEIs did not use MISHEQA. The number of institutions not reporting their IQAS increased significantly from 11% (35 HEIs) in 2020 to 26% (88 HEIs) in 2021. This lack of reporting obstructs LLDIKTI's ability to monitor institutional quality and provide targeted support for accreditation improvements. In 2021, only 7 out of 334 institutions had achieved A-level accreditation, highlighting the urgency of the issue. Without consistent data reporting, LLDIKTI cannot evaluate the progress of IQAS implementation or effectively encourage institutions to improve quality. This study was designed precisely to explore those underlying causes. The initial assumption is that the limited perceived benefits of

MISHEQA, particularly from the perspective of private universities, contributed to declining usage. Moreover, by 2021, the system overlapped with DIKTI's national SPMI reporting platform, resulting in double reporting obligations. These two factors, the unclear usefulness of MISHEQA for HEIs and the burden of redundant reporting, emerged as the main contributors to the increase in non-reporting institutions between 2020 and 2021. Therefore, it is crucial to assess whether MISHEQA is effective and beneficial for users, and how it can be improved to increase adoption.

This study aims to evaluate the effectiveness of MISHEQA in supporting the implementation and reporting of IQAS from the perspective of multiple stakeholders. The evaluation concentrates on three areas: (1) how well MISHEQA facilitates IQAS implementation and reporting across HEIs, (2) the usefulness and relevance of its key features for various user groups, and (3) how well MISHEQA aligns with the performance goals and developmental needs of HEIs. The findings from this assessment are expected to provide clear evidence of MISHEQA's strengths and weaknesses, along with practical recommendations to improve quality assurance reporting systems in higher education.

The total number of Higher Education Institutions (HEIs) in the year 2021 was 246, with a sample size of 73. Out of this sample, 82 respondents completed the MISHEQA, representing 112% of the total sample size. Additionally, the proportion of the sample to the population is calculated by dividing the number of respondents (82) by the total number of HEIs (246), resulting in a proportion of 33%. This proportion helps assess the sample's representation in relation to the entire population of HEIs. Although several studies have discussed quality assurance in higher education, there is limited research that examines multiple stakeholder perspectives on quality assurance reporting systems, particularly in the context of the MISHEQA application managed by LLDIKTI Region VII. This study aims to address this gap by examining not only the system features but also their practical implementation across various user groups. The novelty of this study lies in its comprehensive stakeholder-based analysis, which includes input from LLDIKTI officials, HEI users, and quality assurance experts. Through this approach, the study offers practical recommendations to improve MISHEQA as a strategic quality assurance tool.

The MISHEQA application is central to LLDIKTI Region VII's quality assurance efforts (LLDIKTI VII, 2022). It simplifies reporting processes by leveraging technology to improve efficiency and effectiveness, reflecting a broader shift in higher education toward digital tools for quality management. Consequently, quality assurance agencies must be monitored and evaluated throughout the process to fulfill their roles (Hariyanti & La Masidonda, 2020; Ubachs & Henderikx, 2022). The focus on quality is essential, not only as a regulatory requirement but also as a strategic asset for building institutional trust and ensuring long-term sustainability. As Giatman et al. (2020) highlight, implementing internal quality assurance systems in higher education institutions plays a critical role in improving the performance and accountability of academic programs. Additionally, Religia et al. (2024) emphasize that perceived quality is fundamental in shaping user trust and satisfaction, a concept that goes beyond retail and is equally important in education, where quality directly impacts stakeholder engagement, credibility, and institutional competitiveness.

Ensuring quality in higher education requires adherence to well-defined standards across multiple dimensions, including teaching, learning, research, community service, innovation, technology, personnel, and students (Laliyo et al., 2023). To achieve this, institutions must establish a culture of quality supported by policies that shape practices. This involves providing adequate teaching and learning facilities, employing qualified lecturers, setting minimum benchmarks for student performance, and ensuring effective instructional management. Complementary measures include monitoring institutional operations, enhancing staff competencies, offering continuous professional development, accrediting programs and institutions, and conducting regular

evaluations supported by standardized documentation (Fagrell et al., 2020). According to Schellekens et al. (2023), quality assurance is a systematic and ongoing process aimed at both improvement and accountability. It encompasses internal mechanisms, such as self-assessments, surveys, curriculum mapping, and reflective discussions, that ensure alignment between learning outcomes and assessment practices. External mechanisms, on the other hand, involve accreditation agencies and regulatory bodies that assess compliance with established standards. Aligning these internal and external processes, consistently engaging stakeholders, and leveraging digital tools such as dashboards are essential for enhancing transparency and accessibility.

Similarly, Al-Omari & Al- Khawaldeh (2022) describe quality assurance in higher education as a structured and continuous effort to uphold standards in teaching, research, infrastructure, and services. It ensures compliance with academic and operational benchmarks, promotes student growth, and supports broader societal progress. Conversely, weak quality assurance can undermine student satisfaction and institutional effectiveness. Kumar et al. (2020) further highlight its strategic role in strengthening the global credibility and competitiveness of higher education institutions. Accreditation, in particular, is a vital instrument for standardization and continuous improvement, influencing institutional reputation, graduate employability, and overall academic excellence. Moreover, by aligning with international standards, quality assurance fosters innovation, advances research productivity, and contributes to long-term societal development. In sum, achieving quality in higher education requires a proactive, holistic, and integrative approach, one that combines internal assessments, external validations, stakeholder engagement, and technology integration to drive sustainable academic excellence (Asiyai, 2020; Kooli, 2019; Nasim et al., 2020).

Guangli (2016) highlights that the effectiveness of China's higher education quality evaluation system is largely determined by policy assessment. At a macro level, this system relies on external quality evaluations, including government reviews, quality certifications, and university rankings. The external assurance process may involve either accreditation or certification, depending on the extent of government involvement. China's first undergraduate teaching evaluation essentially functioned as a form of administrative accountability, reflecting government-led oversight of universities. Although the initial evaluation round was considered relatively successful, there remained significant room for improvement. Establishing a social accountability mechanism is therefore crucial to enhancing China's quality assessment framework. Currently, the system remains heavily reliant on government-driven accountability, which has demonstrated limited effectiveness. On the other hand, assessments conducted solely by civil society are not a feasible alternative. The most effective way to engage all higher education stakeholders in the governance and oversight of universities, while also enhancing the credibility of quality evaluations, is to develop a more comprehensive and inclusive social accountability system tailored to China's national context. Such an approach is essential for improving the overall effectiveness of higher education quality assessment in the country.

The notion of multiple stakeholder perspectives in higher education highlights that universities and quality assurance mechanisms function within an interconnected network rather than in isolation. This network encompasses students, faculty, administrators, industry partners, alumni, and regulators, each bringing unique expectations and priorities (Jain et al., 2024). Such diversity necessitates a responsive and inclusive quality assurance approach built on mutual trust, effective communication, and value co-creation to strengthen institutional credibility and performance. Recent scholarship emphasizes the significance of accounting for diverse stakeholder perspectives to reveal deeper insights and balance both ethical and practical dimensions, as illustrated in the work of Redrup (Hill et al., 2023), which employed semi-automated analysis to distinguish priorities across stakeholder groups. When applied to

systems such as MISHEQA, this perspective makes it evident that success depends on acknowledging and integrating these multiple layers of stakeholder input to ensure relevance, usability, and long-term institutional development.

Qualitative data refers to non-numerical information that captures concepts, opinions, experiences, or meanings. It is often collected through methods such as interviews, observations, open-ended survey responses, videos, and audio recordings. Qualitative data places more emphasis on comprehending the richness, context, and depth of information than quantitative data, which is more concerned with numerical measurements and statistical analysis. In the context of research, qualitative data helps researchers explore complex issues, identify patterns, and develop insights into people's perspectives and behaviors. Analyzing this type of data typically involves identifying themes, coding textual information, and interpreting narratives to understand underlying meanings (Rasheed et al., 2024).

The study employed thematic analysis, a qualitative data analysis method, to examine transcribed interviews. This analysis followed six key phases: data immersion, code development, refinement, categorization, creation of a codebook, and thematic mapping. These steps facilitated the identification of critical themes related to higher education quality assurance and technology-driven quality improvement through the MISHEQA (Jain et al., 2024; Lester et al., 2020; Nurul Izza & Mi'raj, 2023). In alignment with Rosairo (2023), this study employed an inductive method, enabling patterns and themes to surface organically from the transcriptions of in-depth interviews. The researcher thoroughly analyzed the data to uncover repeated themes, concepts, and patterns, not just to describe them, but to interpret and provide insights into behaviors or social phenomena by developing meaningful thematic constructs. Each theme was labeled to reflect its core idea and guide focused interviews Rosairo (2023). Furthermore, as (Naeem et al., 2023) noted, while thematic analysis is widely popular for handling thick descriptive qualitative data, its application may lead to complexity in interpreting outcomes as conceptual models. To address this, the study ensured systematic mapping and interpretation of the resulting themes into coherent findings (Naeem et al., 2023).

An effective information system plays a central role in supporting digital business operations by significantly enhancing efficiency, effectiveness, reach, and decision-making capabilities. It reduces operational costs, facilitates real-time communication, and enables institutions to operate (Setyowati et al., 2021). Such a system should seamlessly incorporate key components such as performance monitoring, evaluation, and expert-based assessment. These elements work together to provide managers with accurate data and insights for informed decision-making. Additionally, a robust information system must be secure, user-friendly, and adaptable to the evolving needs of its users and external stakeholders. Ultimately, the impact of a good information system extends beyond internal efficiencies; it empowers organizations to thrive in fast-changing digital environments, ensuring long-term competitiveness and sustainability. Its integration into institutional processes is essential for promoting transparency, accountability, and continuous improvement across sectors (Hidayah et al., 2024; Lvovich et al., 2019).

The TAM was initially introduced by Davis (1989) as an adaptation of the Theory of Reasoned Action (TRA) to explain and predict user acceptance of information systems. It emphasizes that users' perceptions of usefulness and ease of use strongly influence their attitudes and intentions toward adopting a technology. In this study, the importance of the information system is evaluated using the Technology Acceptance Model (TAM), focusing on key constructs: Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Attitude Toward Using (ATU), Behavioral Intention to Use (BI), and Actual System Use (MISHEQA). These constructs are the main indicators to assess how users perceive and adopt MISHEQA for IQAS reporting. By employing both qualitative methods (such as interviews and focus groups) and quantitative methods (like surveys), the study

gathers both user perceptions and actual system usage, offering a comprehensive assessment of MISHEQA's effectiveness and potential improvements. Although the research uses a mixed-methods approach, the quantitative findings are not detailed in this publication, which mainly emphasizes qualitative insights. The results aim to inform future system development and policy decisions regarding national quality assurance platforms.

TAM is favored for its simplicity and strong empirical support, making it adaptable to different technologies and contexts. TAM remains recognized as an appropriate model for quantitative information management research, effectively determining and assessing users' technology usage behavior over time (Enu-Kwesi & Opoku, 2020). Over time, researchers have extended TAM by adding external variables such as social influence, facilitating conditions, and affective factors to better explain technology acceptance in specific settings, like mobile learning (Alsharida et al., 2021). In the context of this study, TAM is particularly relevant for evaluating MISHEQA because the system's success depends on user acceptance across diverse stakeholders in higher education institutions. The constructs of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) provide a clear lens to assess whether MISHEQA genuinely supports IQAS reporting (PU) and whether users find it simple and practical to operate (PEOU). Since resistance to adoption and inconsistent reporting were identified as key problems, TAM helps explain how these perceptions shape user attitudes, behavioral intentions, and ultimately the actual utilization of MISHEQA. Thus, TAM serves as an appropriate theoretical framework to analyze both the strengths and shortcomings of MISHEQA in supporting quality assurance implementation.

2. RESEARCH METHOD

This qualitative research followed the process outlined in Figure 1.

Figure 1. Flowchart of the research

The study began with an extensive literature review to establish a comprehensive understanding of the existing body of knowledge on higher education quality assurance, IQAS, and the use of information management systems in higher education institutions. This phase involved reviewing relevant academic articles, reports, books, and other scholarly sources to establish a theoretical foundation for the research. Following the literature review, research instruments were designed to collect qualitative data. This involves formulating interview questions for experts, developing focus group discussion (FGD) guides, and creating survey questionnaires for respondents. The instruments were tailored to capture insights on Internal Quality Assurance System (IQAS) implementation, clustering, and training needs from both LLDIKTI Region VII and user perspectives.

Figure 2. Sequence of the data collection process

Figure 2 illustrates that the data collection process began with administering surveys to 82 respondents and conducting focus group discussions (FGD) with 44 users from 6 private higher education institutions (PTS) in East Java. Following this, additional FGD sessions were organized with 7 representatives from LLDIKTI VII, providing insights into the regional perspective from institutional leaders. Subsequently, the data collection culminated with in-depth interviews conducted with 2 experts. This structured sequence ensured a systematic approach to gathering qualitative data, enabling a thorough exploration of perspectives related to the MISHEQA program and quality assurance.

After data collection, the gathered information was organized and prepared for analysis. This included transcription of interview recordings, categorization of FGD responses, and the conversion of survey responses into a format suitable for analysis. Data pre-processing ensures that the information is ready for the subsequent analytical steps. Thematic analysis was employed as the methodological approach for data analysis. This involves identifying and exploring key themes, patterns, and insights derived from the qualitative data. The analysis aims to uncover perspectives, challenges, and opportunities related to the implementation of MISHEQA, internal quality assurance, and the broader context of quality improvement in higher education.

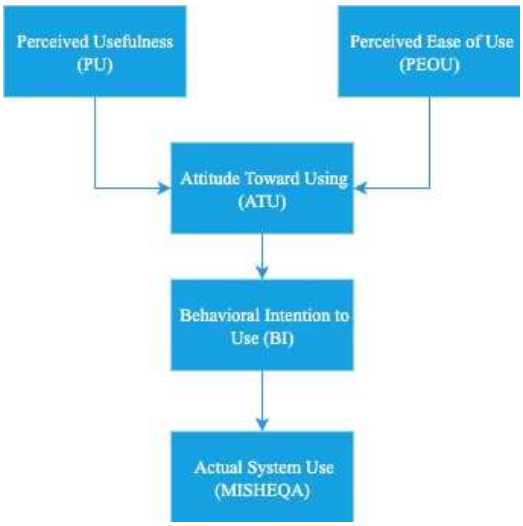

Figure 3. Technology Acceptance Model (TAM) applied to MISHEQA

Furthermore, this study adopted the Technology Acceptance Model (TAM) as its theoretical framework to explain user behavior toward the MISHEQA system. As shown in Figure 3, TAM provides a structured lens to analyze how users' perceived usefulness and perceived ease of use influence their attitude toward the system, which subsequently affects their behavioral intention and actual system use. The model was used to guide the formulation of interview questions and the interpretation of findings, ensuring the research captures both user experience and acceptance factors.

3. RESULTS AND DISCUSSIONS

The study's findings provide a comprehensive evaluation of MISHEQA, the Management Information System for Higher Education Quality Assurance, as a tool for quality assurance in educational establishments. Thematic analysis showed that universities classified in the yellow and red clusters have benefited most from MISHEQA, suggesting that the program had a positive impact on higher education institutions needing development. LLDIKTI Region VII stakeholders are pleased with MISHEQA's capacity to document the implementation of Internal Quality Assurance Systems (IQAS). By visualizing the quality state of the institutions through green, yellow, and red classifications, the clustering process helps LLDIKTI make strategic decisions and allocate resources for future improvements.

3.1 User Perspective

Based on a survey of 82 respondents, several key insights were gathered regarding the MISHEQA application. The respondents were asked the following question "Have you experienced any challenges while using the MISHEQA application?" The results are illustrated in the pie chart below.

Figure 4. Respondents' Answers to the Question: "Have you experienced any challenges while using the MISHEQA application?"

As shown in Figure 4, 38% of respondents reported experiencing challenges ('Yes'), while 62% indicated no significant issues ('No'). Following this, respondents who answered "Yes" were asked to elaborate on the specific issues they faced. The table below summarizes the common challenges mentioned:

Table 1. User Challenges in Using the MISHEQA Application

Challenges	Quantity
Verification delays (2022 data unvalidated; if not validated yet, will display as red cluster)	13
Supporting document issues (e.g., lack of understanding, inconsistency, required preparation, excessive documentation, absence of examples)	12
MISHEQA inaccessibility (not socialized, unclear next steps)	4
Outdated accreditation data	2
Repetitive annual input (unsynchronized with IQAS)	2
Facilitator responses - inaccessible links (upload recommended)	1
Inability to update data directly (requires instructions)	1

The respondents identified several necessary features that are currently lacking in the application. These include a dashboard for standard achievements and period comparisons, an integration feature that combines data from various sources like Neo-Feeder, Arjuna, and SPMI Ministry of Education and Culture, and a notification system for any deficiencies, period openings, and progress at each stage of the application process. They also expressed the need for a guide and a list of necessary documents to be uploaded, a feature to view and download the results of the MISHEQA assessment per item, a responsive helpdesk or contact person, and a showcase of IQAS innovations that have been implemented. Despite these challenges, respondents valued MISHEQA's reporting (determination, implementation, evaluation) and upload features. On the other hand, the respondents felt that certain features were less necessary. These include the IQAS document feature, as there are already documents at each stage of PPEPP, and the Research and Community Service Implementation feature, as separate reports for these already exist, such as those pulled from SINTA. Since research and community service activities are already integrated into the SINTA database, users expect MISHEQA not to require duplicate reporting. This redundancy reduces efficiency and increases administrative burdens, leading users to view reporting and document upload functions as more useful, while perceiving the research and community service features as less relevant. These insights, combined with feedback and suggestions from discussions with LLDIKTI VII, the six private universities, and the two experts, provide a comprehensive understanding of the current state of the MISHEQA application and the areas that

require improvement. This feedback is crucial in ensuring that MISHEQA continues to serve as an effective tool for quality assurance in higher education, meeting the needs of all stakeholders involved.

There is also an expectation for improved quality assurance through several strategic enhancements. First, the verification process should be accelerated by identifying and resolving bottlenecks that delay progress, implementing automation technologies to streamline workflows, and introducing effective notification systems to alert relevant parties about necessary actions. Second, the preparation of supporting documents should be simplified by offering clear and accessible guidance on required documents, providing sample templates for reference, and ensuring the platform includes secure and easily accessible document storage. Third, the accreditation table must be regularly updated to maintain accurate and up-to-date information, supported by a user feedback mechanism to flag outdated entries. Additionally, the application should include detailed guidance on every step of the process, accompanied by complete sample documents to help users meet the requirements. It is also essential to clarify the application's purpose, outlining its intended benefits and the estimated timeframe required for each stage. Lastly, the platform's affordability and reliability should be improved by ensuring easy access for all users and consistently addressing bugs or technical issues through regular updates. Holding discussions with six private universities provides further evidence for this claim. Necessary parties involved in the creation and use of the MISHEQA application include these universities. The discussion points are illustrated in Figure 5.

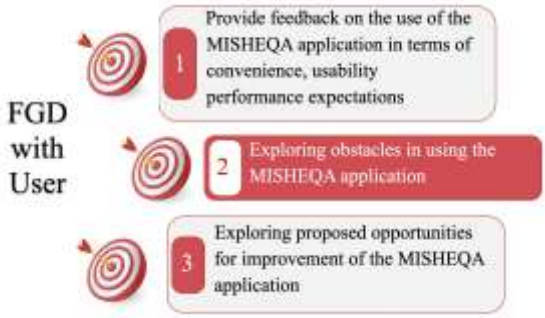

Figure 5. Discussion Points with User

The discussion is structured into three main goals. First, users are invited to provide feedback on the application's usability, convenience, and performance expectations. Second, the FGD explores any obstacles or difficulties users face while using the MISHEQA application. Lastly, the session seeks to identify suggestions and opportunities for improving the application based on user experience and insights. These objectives aim to enhance the overall quality and user satisfaction of the MISHEQA system.

3.2 Facilitator Perspective

This FGD with LLDIKTI VII complements the previous discussions conducted with six private universities. The discussion points are illustrated in Figure 6.

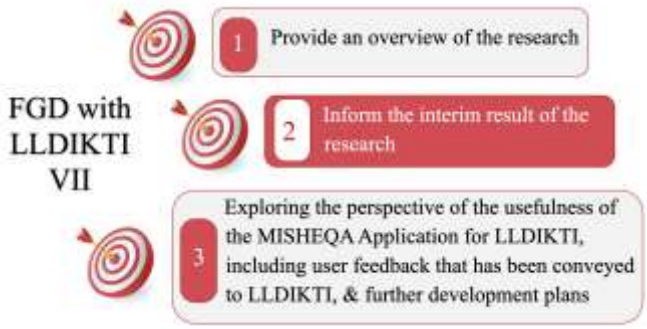

Figure 6. Discussion Points with LLDIKTI VII

These universities were key stakeholders in the use and development of the MISHEQA application. Their unique insights and experiences with the application, focusing on its convenience, usability, and performance, were invaluable in identifying any obstacles they have encountered while using MISHEQA. This provides a real-world perspective on the application's functionality and areas that may need improvement. Moreover, these discussions explore proposed opportunities for enhancing the MISHEQA application. Suggestions from these universities, which are directly involved in the application's daily use, have been instrumental in shaping the future development of MISHEQA.

In addition to the discussion with LLDIKTI VII and the six private universities, we have also conducted discussions with two experts in quality assurance. These experts bring a wealth of knowledge and experience that is invaluable to the development and refinement of the MISHEQA application. The goal of these discussions with the experts aligns with that of the discussion with LLDIKTI VII. They aim to provide an overview of the research, inform preliminary research results, and explore the perspective on the usefulness of the MISHEQA application. The experts' feedback, based on their deep understanding and experience in the field, contributes significantly to identifying areas of improvement and proposing opportunities for enhancing the MISHEQA application.

3.3 Expert Perspective

Following the FGD with experts, the discussion points are illustrated in Figure 7.

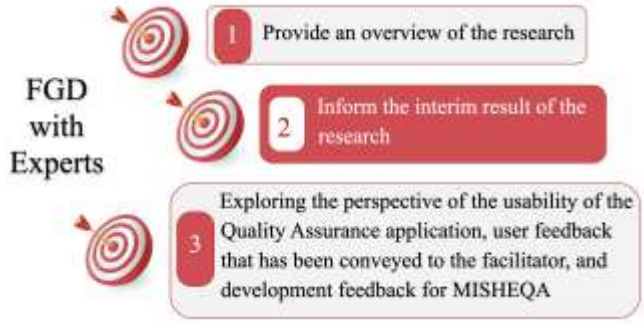

Figure 7. Discussion Points with Expert

Through this FGD, explore a comprehensive overview of the challenges and opportunities associated with the MISHEQA and IQAS mapping applications that have emerged. Notably, MISHEQA's role in capturing processes was discussed, highlighting the need for clearer guidelines and examples to aid users. The fact that excellent

accreditation does not automatically guarantee that the institution has a green cluster is due to the use of different instruments, different focus, different evaluation steps, and different assessment concepts. The IQAS mapping application, intended for PPEPP profiling, encountered issues of instability and challenges in controlling and improving access in 2022. It became apparent that the lack of standardization in reporting previous audit reports and the absence of a unified verification process posed hurdles during evaluations.

The discussion also addressed the need for adapting MISHEQA in accordance with Ministerial Regulation No. 53 of 2023 and the potential for it to serve as a valuable tool for identifying training needs based on achieved standards. The disparity in guidelines across different sectors, including vocational, academic, and religious affairs, was acknowledged, emphasizing the need for standardized practices. Challenges in the IQAS mapping verification process, including the upload of numerous documents and varying verification times, were discussed. The absence of clear roles, lack of honorarium for facilitators, and differing perceptions among facilitators further complicated the verification process.

Issues related to the recording-centric approach of MISHEQA and IQAS, rather than a focus on assessing utility, were highlighted. The lack of effective communication regarding recognition and awards for participating universities emerged as a motivational and awareness gap. The proposal to integrate accreditation and the evaluation of new programs with IQAS was revisited, with potential benefits for enhancing the overall quality assurance framework. The need for LLDIKTI to have monitoring access for IQAS PTs under its jurisdiction in the Ministry of Education and Culture's IQAS mapping application was highlighted as a crucial step for effective oversight. In conclusion, the discussion with experts provided valuable insights, paving the way for considerations and improvements in MISHEQA and the IQAS mapping applications. Addressing the identified challenges will be pivotal in enhancing the functionality and impact of these tools in the realm of quality assurance for higher education institutions.

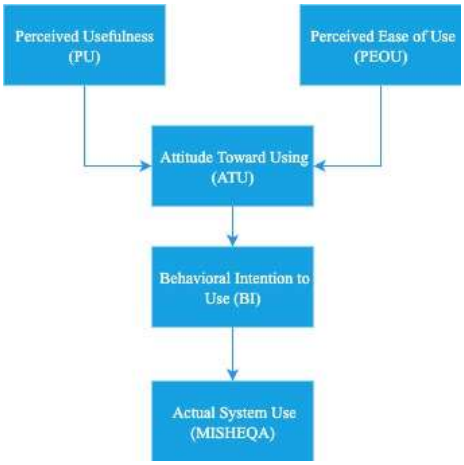

Figure 8. Technology Acceptance Model (TAM)

To further explain user interaction with MISHEQA, this study applies the Technology Acceptance Model (TAM) as illustrated in Figure 8. TAM helps interpret how users' beliefs about the usefulness and ease of use of MISHEQA influence their attitude, intention, and actual system use. According to the findings, many users, particularly those from institutions in the yellow and red clusters, acknowledge that MISHEQA supports effective IQAS reporting (Perceived Usefulness). However, challenges such as unclear document guidelines and delayed verification impacted their experience

(Perceived Ease of Use). Despite these issues, most users expressed a positive attitude toward using the system, citing the reporting and upload features as most beneficial.

This positive attitude led to continued use and a firm behavioral intention, particularly among institutions that required improvement. The integration of user feedback into MISHEQA's development further reinforces the system's adoption and relevance in quality assurance processes. Thus, the TAM model confirms that both perceived usefulness and ease of use are critical in shaping actual usage behavior among higher education institutions.

This application of TAM provides essential practical implications, particularly for system developers and policymakers. Improving system clarity, reducing verification delays, and incorporating user-centric enhancements can strengthen perceived ease of use, while reinforcing MISHEQA's core functions can elevate perceived usefulness. These improvements are especially relevant for institutions still categorized in the red and yellow clusters. From a theoretical perspective, this study extends the relevance of TAM beyond individual-level learning tools commonly applied to mobile or e-learning platforms into the domain of institution-wide reporting systems. It supports the findings from Alsharida et al. (2021), who, in a systematic literature review, emphasized that perceived usefulness and perceived ease of use are the strongest predictors of technology adoption in educational contexts.

Although the Technology Acceptance Model (TAM) has been widely applied in educational technology research, most studies focus on individual-level tools like mobile learning or e-learning platforms, leaving a theoretical gap in its application to administrative, institution-wide systems such as MISHEQA. This study addresses that gap by applying TAM to a government-mandated quality assurance system used across 334 private higher education institutions in East Java. Additionally, there is a population gap, as previous research tends to involve homogeneous participants like students or faculty, whereas this study includes various HEI stakeholders, who are users, LLDIKTI officers, and quality assurance experts. A methodological gap is also addressed by combining qualitative and quantitative methods, including surveys, interviews, and FGDs, rather than relying solely on statistical modeling. The study identifies a conceptual gap by linking user-experienced problems, such as delayed verification and redundant documentation, to TAM constructs like perceived ease of use. An application gap exists because MISHEQA had not previously been assessed using TAM, and a practical gap remains in the literature regarding post-implementation evaluation of government-developed digital systems. Critically, this study fills a temporal gap, as no formal evaluation had been conducted since MISHEQA's launch in 2019, despite reporting data showing that 11% of institutions (35 of 318) failed to report in 2020, rising to 26% (88 of 334) in 2021. These non-reporting trends hinder LLDIKTI's ability to monitor IQAS implementation and push HEIs toward accreditation improvements, especially since only 7 institutions had achieved A accreditation as of 2021. Thus, this study not only evaluates MISHEQA's effectiveness but also provides practical feedback for improving reporting systems, directly informing the transition to the nationally managed "Pelaporan SPMI" application.

4. CONCLUSION

This study demonstrates that MISHEQA was useful in supporting IQAS reporting, particularly for HEIs in the red and yellow clusters, through its reporting and document upload features. However, some functions were considered redundant due to existing mechanisms, such as the PPEPP cycle and SINTA indicators. Key challenges included limited system integration and the burden of double reporting, which ultimately contributed to the discontinuation of MISHEQA and its replacement by DIKTI's nationally managed *Pelaporan SPMI* application in 2021. Significantly, this transition was based on

LLDIKTI's evaluation of MISHEQA's effectiveness, which led to the policy decision to adopt a centralized application while ensuring that LLDIKTI retained its full capacity to monitor and evaluate institutional performance, including key performance indicators (IKU). The results of this evaluation were also formally communicated by LLDIKTI to the developers of the national SPMI Reporting system, providing practical input to prevent the recurrence of weaknesses such as redundant reporting, limited integration, and unclear guidance. This ensures that lessons learned from MISHEQA directly inform the refinement of the national platform.

Despite offering valuable insights, the study has limitations, particularly the restricted coverage of FGDs due to time and institutional constraints. This selected sampling may have reduced perspective diversity, especially from smaller or remote HEIs. Future research should therefore adopt a broader scope by involving more institutions, utilizing longitudinal data, and conducting comparative analyses between regional and national quality assurance platforms. Overall, the findings highlight the importance of designing integrated, user-friendly quality assurance systems that minimize reporting burdens while strengthening institutional accountability. As Indonesia transitions to the *Pelaporan SPMI* application, further evaluations will be essential to assess its effectiveness, adaptability, and potential to enhance continuous quality improvement in higher education.

REFERENCES

Al-Omari, J. F., & Al- Khawaldeh, A. A. 3. (2022). Quality Assurance in Higher Education Institutions. *Journal of Education and Practice*, *13*(3), 37–44. https://doi.org/10.7176/jep/13-3-04

Alsharida, R. A., Hammood, M. M., & Al-Emran, M. (2021). Mobile Learning Adoption: A Systematic Review of the Technology Acceptance Model from 2017 to 2020. *International Journal of Emerging Technologies in Learning*, *16*(5), 147–162. https://doi.org/10.3991/ijet.v16i05.18093

Asiyai, R. I. (2020). Best practices for quality assurance in higher education: implications for educational administration. *International Journal of Leadership in Education*. https://doi.org/10.1080/13603124.2019.1710569

Davis, F. D. (1989). Davis 1989. *MIS Quarterly*, *13*(3), 319–340.

Enu-Kwesi, F., & Opoku, M. O. (2020). Relevance of the technology acceptance model (TAM) in information management research: a review of selected empirical evidence. *Pressacademia*, *7*(1), 34–44. https://doi.org/10.17261/pressacademia.2020.1186

Fagrell, P., Fahlgren, A., & Gunnarsson, S. (2020). Curriculum development and quality work in higher education in Sweden: The external stakeholder perspective. *Journal of Praxis in Higher Education*, *2*(1), 28–45. https://www.abet.org/

Giatman, M., Siswati, S., & Basri, I. Y. (2020). Online Learning Quality Control in the Pandemic Covid-19 Era in Indonesia. *Journal of Nonformal Education*, *6*(2), 168–175. https://doi.org/10.15294/jne.v6i2.25594

Guangli, Z. (2016). The Effectiveness of the Higher Education Quality Assessment System: Problems and Countermeasures in China. *Chinese Education & Society*, *49*(1–2), 39–48. https://doi.org/10.1080/10611932.2016.1192385

Hariyanti, D., & La Masidonda, J. (2020). Developing The Model Of Assistance, Monitoring And Evaluation To Implement Leader Commitment In Re-Functioning Of Higher Education Internal Audit In Maluku-Palarch's. *Journal Of Archaeology Of Egypt/Egyptology*, *17*(4), 968.

Hidayah, N. A., Amri, F. B., & Mutholib, A. (2024). Design and Integration of Information Systems for the Halal Inspection Institute (LPH) UIN Syarif Hidayatullah Jakarta with SiHalal Ministry of Religion of the Republic of Indonesia. *Applied Information System and Management (AISM)*, *7*(2), 7–16. https://doi.org/10.15408/aism.v7i2.36786

Jain, V., Mogaji, E., Sharma, H., & Babbili, A. S. (2024). A multi-stakeholder perspective of relationship marketing in higher education institutions. In *Journal of Marketing for Higher Education* (Vol. 34, Issue 2, pp. 502–520). Routledge. https://doi.org/10.1080/08841241.2022.2034201

Kooli, C. (2019). Governing and managing higher education institutions: The quality audit contributions. *Evaluation and Program Planning*, *77*. https://doi.org/10.1016/j.evalprogplan.2019.101713

Kumar, P., Shukla, B., & Passey, D. (2020). IMPACT OF ACCREDITATION ON QUALITY AND EXCELLENCE OF HIGHER EDUCATION INSTITUTIONS. In *REVISTA INVESTIGACION OPERACIONAL* (Vol. 41, Issue 2).

Laliyo, S., Usu, I., Yakup, Y., & Karundeng, D. R. (2023). Service Strategy for Higher Education Service Institutions Region XVI Gorontalo. *International Journal Of Education, Social Studies, And Management (IJESSM)*, *3*(2), 46–58. https://doi.org/10.52121/ijessm.v3i2.153

Lester, J. N., Cho, Y., & Lochmiller, C. R. (2020). Learning to Do Qualitative Data Analysis: A Starting Point. *Human Resource Development Review*, *19*(1), 94–106. https://doi.org/10.1177/1534484320903890

LLDIKTI VII. (2022). *Buku pedoman pengisian aplikasi MISHEQA* (Vol. 15018).

Lvovich, I. Y., Lvovich, Y. E., Preobrazhenskiy, A. P., Preobrazhenskiy, Y. P., & Choporov, O. N. (2019). Modelling of information systems with increased efficiency with application of optimization-expert evaluation. *Journal of Physics: Conference Series*, *1399*(3). https://doi.org/10.1088/1742-6596/1399/3/033079

Naeem, M., Ozuem, W., Howell, K., & Ranfagni, S. (2023). A Step-by-Step Process of Thematic Analysis to Develop a Conceptual Model in Qualitative Research. *International Journal of Qualitative Methods*, *22*. https://doi.org/10.1177/16094069231205789

Nasim, K., Sikander, A., & Tian, X. (2020). Twenty years of research on total quality management in Higher Education: A systematic literature review. *Higher Education Quarterly*, *74*(1), 75–97. https://doi.org/10.1111/hequ.12227

Nurul Izza, N., & Mi'raj, D. A. (2023). A Qualitative Analysis on Pesantren Economic: NVivo Approach. *The Economic Review of Pesantren*, *2*(1). http://journals.smartinsight.id/index.php/ERP

Rasheed, Z., Waseem, M., Ahmad, A., Kemell, K.-K., Xiaofeng, W., Duc, A. N., & Abrahamsson, P. (2024). Can Large Language Models Serve as Data Analysts? A Multi-Agent Assisted Approach for Qualitative Data Analysis. *ArXiv*. http://arxiv.org/abs/2402.01386

Redrup Hill, E., Mitchell, C., Brigden, T., & Hall, A. (2023). Ethical and legal considerations influencing human involvement in the implementation of artificial intelligence in a clinical pathway: A multi-stakeholder perspective. *Frontiers in Digital Health*, *5*. https://doi.org/10.3389/fdgth.2023.1139210

Religia, Y., Ramawati, Y., & Syahwildan, M. (2024). Analysis of the Effect of Perceived Product Quality on Retail Purchase Intention: The Mediating Role of Consumer Trust and Price Sensitivity Moderation. *Applied Information System and Management (AISM)*, *7*(1), 17–22. https://doi.org/10.15408/aism.v7i1.33914

Rosairo, H. S. R. (2023). Thematic analysis in qualitative research. In *Journal of Agricultural Sciences - Sri Lanka* (Vol. 18, Issue 3). Faculty of Agricultural Sciences, Sabaragamuwa University of Sri Lanka. https://doi.org/10.4038/JAS.V18I3.10526

Schellekens, L. H., van der Schaaf, M. F., van der Vleuten, C. P. M., Prins, F. J., Wools, S., & Bok, H. G. J. (2023). Developing a digital application for quality assurance of assessment programmes in higher education. *Quality Assurance in Education*, *31*(2), 346–366. https://doi.org/10.1108/QAE-03-2022-0066

Setyowati, W., Widayanti, R., & Supriyanti, D. (2021). Implementation Of E-Business Information System In Indonesia : Prospects And Challenges. In *International Journal of Cyber and IT Service Management (IJCITSM)* (Vol. 1, Issue 2). https://iiast-journal.org/ijcitsm/index.php/IJCITSM/article/view/49

Ubachs, G., & Henderikx, P. (2022). Quality assurance systems for Digital Higher Education in Europe. In *Handbook of Open, Distance and Digital Education* (pp. 1–20). Springer Nature Singapore. https://doi.org/10.1007/978-981-19-0351-9_41-1