

Research Article

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Bridging distance in academic mentoring: A dual-perspective analysis of online thesis supervision implementation in Universitas Terbuka

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Abstract

Background/purpose. This study investigates the perspectives of graduate students and thesis supervisors on the implementation of BIMON, a newly introduced online thesis supervision platform at Universitas Terbuka. It addresses a critical gap in understanding stakeholder experiences during the transition from conventional to digital academic mentoring within Southeast Asia's distance education context.

Materials/methods. Data were collected through parallel online surveys administered to graduate students and supervisors during the 2024–2025 academic year, combining closed- and open-ended questions tailored to each group. This paper qualitatively analyzes open-ended responses on perceived benefits, challenges, and suggestions for improvement.

Results. Seventy-two students and 59 supervisors voluntarily participated in the survey. Findings indicate that both students and supervisors generally perceive BIMON as an effective tool for facilitating thesis supervision. While students emphasized the importance of communication and feedback mechanisms, supervisors prioritized progress monitoring. Despite its potential, many respondents continued to rely on alternative platforms such as WhatsApp and Zoom, citing usability issues and limited engagement with BIMON's features. These challenges suggest gaps in technical competence and user familiarity.

Conclusion. The findings underscore the importance of regularly socializing new platforms and aligning technological innovations with user expectations and interaction patterns. To enhance the platform's usability and adoption, future research should explore its role in mitigating transactional distance. Furthermore, the Technology Acceptance Model is recommended to guide institutional efforts to provide targeted training and support services. Overall, the findings affirm the promise of online supervision in open and distance learning environments, particularly in improving accessibility, flexibility, and academic engagement.



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1. Introduction

The global shift toward digital learning accelerated by the COVID-19 pandemic has fundamentally transformed academic supervision in higher education (Zaheer & Munir, 2020). Many universities now use Learning Management Systems and digital tools such as WhatsApp, Zoom, Microsoft Teams, and Google Meet. These tools help distance learners to maintain academic progress while balancing work and personal life (Djarmika et al., 2021; Puspitasari et al., 2024). However, dedicated platforms for postgraduate thesis supervision remain limited (Bengtson & Jensen, 2015; Barclay et al., 2018; Camilleri & Camilleri, 2022; Yan et al., 2012).

Compared to conventional universities, Open and Distance Learning (ODL) institutions face more distinct supervision challenges. Moore's transactional distance theory illustrates how physical separation creates communication gaps that can lead to misunderstandings during the supervision process (Falloon, 2011; Mahlangu, 2021). ODL students must cope with supervisory challenges while managing their time among employment, studies, and other personal commitments (Zaheer & Munir, 2020). Likewise, ODL supervisors encounter multifaceted obstacles, including increased workloads, scheduling conflicts, varied student quality, and limited institutional recognition (Askew et al., 2016). Challenges multiply when supervisors are recruited from partner institutions unfamiliar with ODL supervision modalities, creating additional barriers to effective academic mentoring.

The supervisor-student relationship constitutes the foundation of successful thesis completion (De Kleijn et al., 2012). Supervisors alternately function as instructors, collaborators, and mentors (Adel et al., 2023). The "teaching" model emphasizes directive feedback, the "partnership" model builds dialogue, and the "apprenticeship" model fosters learning by example (Cook-Sather, 2015; Bider et al., 2015). However, the effectiveness of these models in digital environments, particularly regarding rapport-building and communication efficiency, remains underexplored in Southeast Asian ODL contexts.

Universitas Terbuka, Indonesia's largest open university, exemplifies the complexity of digital thesis supervision in distance education. The university currently offers nine master's programs with more than 4,000 active students enrolled each semester, located across Indonesia. The university's supervision system has evolved from traditional face-to-face and postal correspondence supervision to email and WhatsApp-based approaches. However, many supervisors are recruited from partner universities who are accustomed to a conventional supervision system and experience challenges adapting to ODL practices. Additionally, national regulations on study duration have increased institutional pressure to improve supervisory efficiency and ensure timely thesis completion.

Universitas Terbuka implements a dual-supervisor model in which the primary supervisor ensures research quality and the co-supervisor provides methodological and writing guidance. Despite this structure, the institution lacks comprehensive monitoring of supervision intensity, communication dynamics, and thesis progress. Although informal digital tools are widely used for supervisor processes, systematic evaluation of structured supervision platforms remains limited.

As well, prior studies often focus on either the student or supervisor perspective, overlooking the integrated, dual-perspective analysis essential for understanding the effectiveness of online supervision (Zaheer & Munir, 2020; Falloon, 2011). Furthermore, ODL institutions, where supervisors and students operate across different geographical regions with varying technological capabilities, commonly lack mechanisms to monitor supervision activities, identify process bottlenecks, or ensure accountability. These constraints are particularly evident in developing countries, including in Universitas Terbuka, where students and supervisors may be dispersed across regions in Indonesia and abroad, with varying access to technology. The absence of empirical evidence on stakeholder experiences with integrated digital supervision platforms represents a crucial knowledge gap in

contemporary academic mentoring literature, especially in higher education contexts in developing countries.

To address these challenges, the Graduate School developed the BIMON (Bimbingan Online) platform in 2024 (Puspitasari et al., 2024). BIMON is a web-based platform that supports structured thesis supervision through integrated communication, scheduling, and progress-monitoring features. It organizes supervision into three phases—proposal development, manuscript preparation, and finalization—allowing for real-time tracking and institutional oversight that was previously unavailable through informal tools.

1.1. The BIMON platform

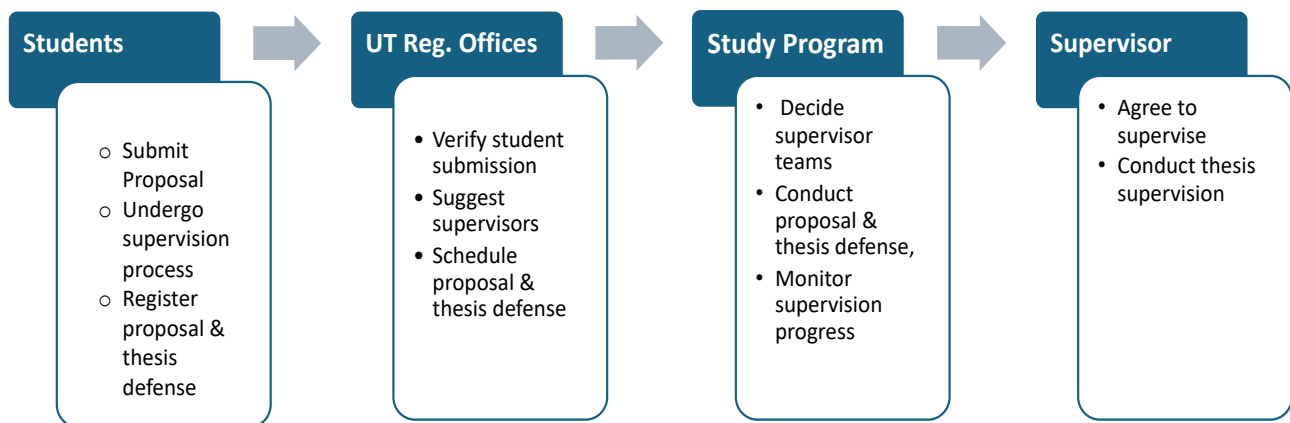


Figure 1. BIMON Application Access Levels

The BIMON application represents an integrated online supervision system designed to facilitate the postgraduate supervision process at UT (Figure 1). This comprehensive platform incorporates a multi-tiered access structure that connects students, administrators, and supervisors through a unified digital environment. The system operates through the MyUT, a landing page for students and lecturers, the primary gateway, enabling seamless coordination of academic supervision activities from proposal submission to final examination completion.

The BIMON comprises four distinct access levels with specific functional responsibilities. The system operates through a systematic workflow that begins with student initiative and progresses through administrative verification, program study approval, and the implementation of active supervision. Students use the platform to submit proposals, write their theses, and undergo supervision. Regional Offices Administrators function as coordinators to verify student submissions, suggest supervisors, and schedule proposal and thesis defenses. Study Program Administrators approve supervisor teams, conduct proposal and thesis defenses, and monitor supervisory progress. Finally, Supervisors use BIMON as their primary platform for conducting comprehensive supervision of students.

This structured approach ensures administrative efficiency while enhancing the quality of supervision through real-time monitoring and comprehensive reporting mechanisms. The multi-tiered architecture promotes accountability, transparency, and quality assurance throughout the postgraduate supervision process, ultimately optimizing both operational effectiveness and academic standards at the university.

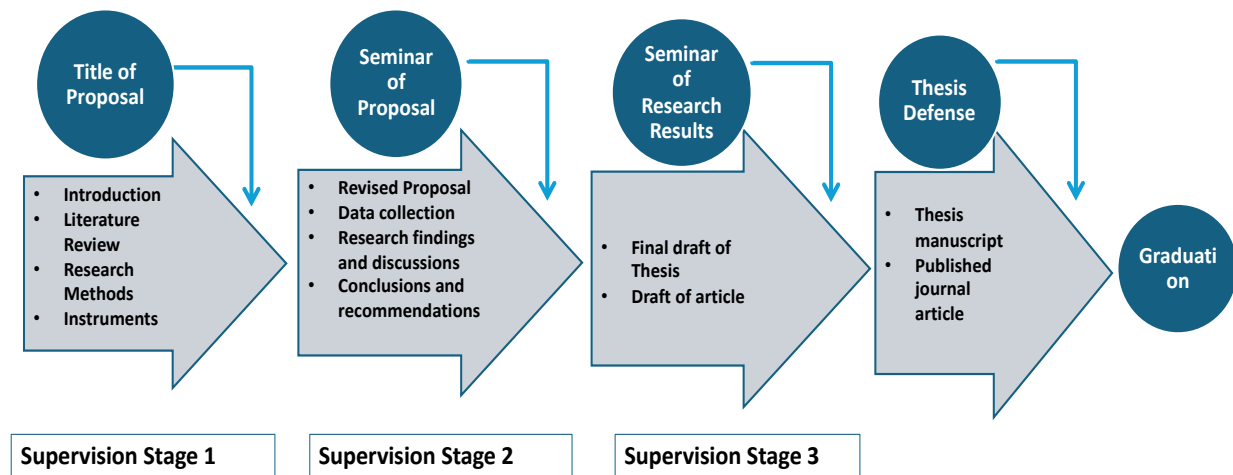


Figure 2. Online Supervision Process Design

Figure 2 illustrates a systematic flow of the thesis supervision process, starting from students submitting a research proposal via BIMON to the completion of the thesis draft before the thesis defence. The process begins with Supervision Stage 1, which includes the development of the introduction, literature review, research methodology, and research instruments. The subsequent stage is the Proposal Seminar (Supervision Stage 2), which focuses on revising the research proposal, conducting the research process, and drafting the thesis. The next stage is the Research Results Seminar, where students present their final thesis manuscript before the thesis defence and consult the article draft for publication.

The final stage of this supervision process is the Thesis Defence (Supervision Stage 3), which prepares students to defend their completed thesis. At this stage, students submit their published journal article as a graduation requirement. This entire sequence culminates in achieving the status of a graduate candidate who has fulfilled all academic requirements. This structured, staged supervision framework ensures that students receive comprehensive and directed academic support from research conceptualization through study completion, thereby guaranteeing that the quality of graduates and the scholarly work produced meets the established academic standards of higher education institutions.

1.2. Thesis Supervision Process in the BIMON Application

Students are required to log in to the MyUT platform and then access the "THESIS" menu on the system's central dashboard (Figure 3). The MyUT dashboard provides a user-friendly interface with comprehensive student information, including academic data such as Grade Point Average, study duration, and other academic developments, all integrated into a unified platform. The features enable students to monitor their academic progress as they complete the research title submission process.

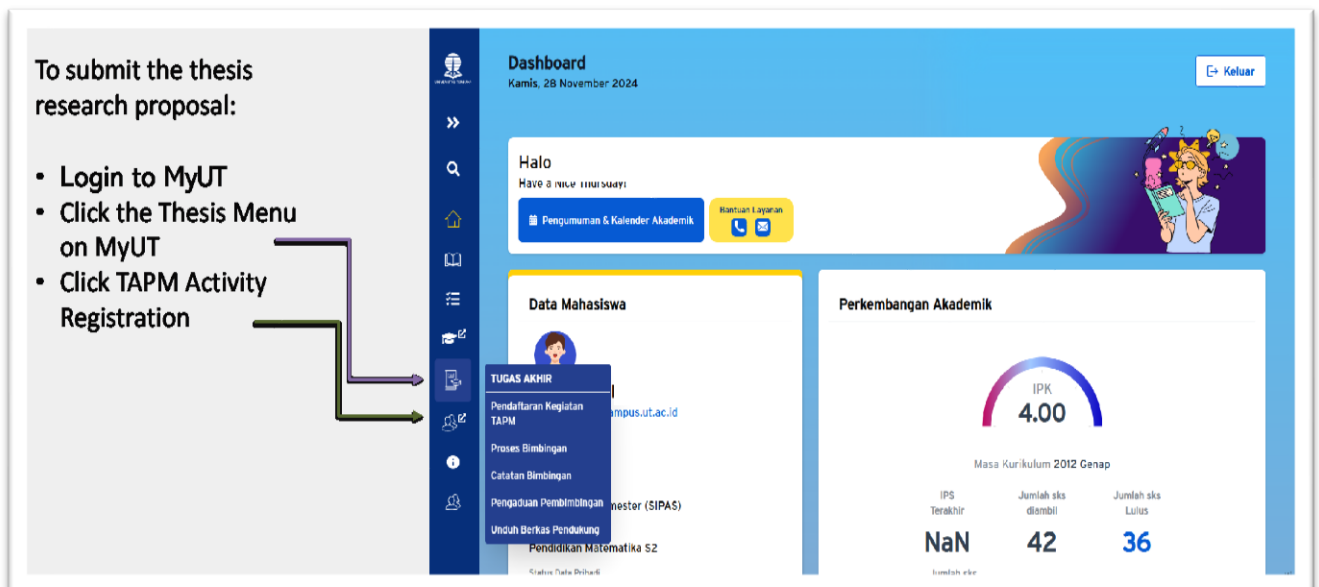


Figure 3. Home Page of the BIMON Application on the Student Side

Figure 4 depicts the interactive feedback and revision process within the MyUT system for thesis/dissertation proposal development. The interface demonstrates a systematic workflow that allows students to re-upload their draft proposals, access comprehensive feedback from both Supervisor 1 (S1) and Supervisor 2 (S2) and engage in iterative improvement cycles. The system provides a structured communication mechanism that allows students to review their supervisors' feedback, revise the proposal, and upload the revised version.

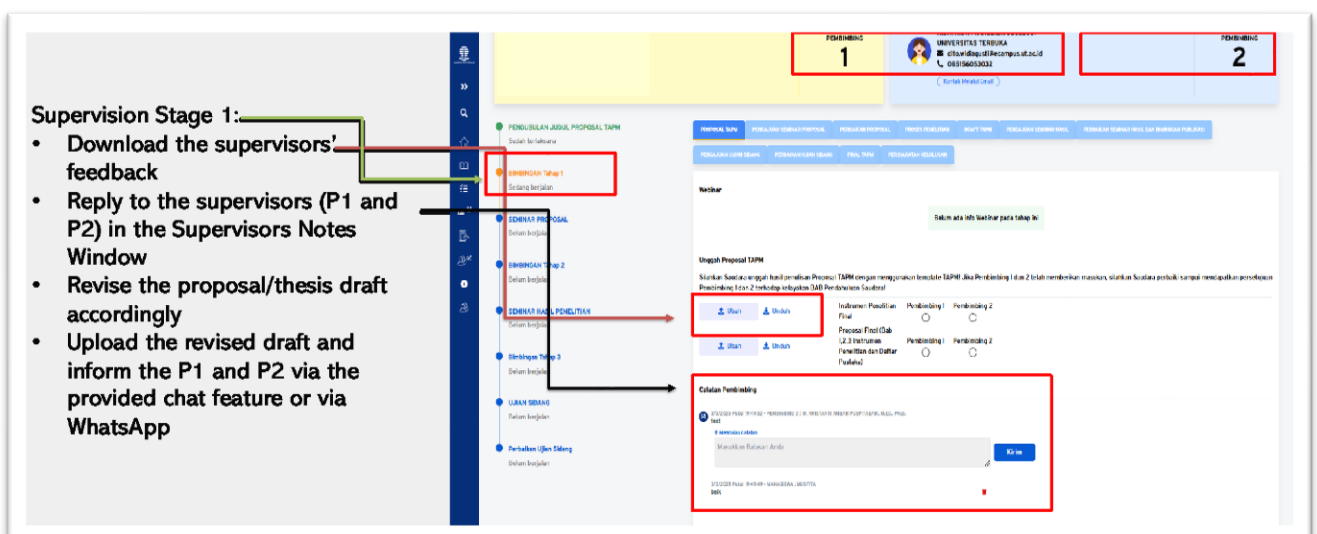


Figure 4. BIMON Application View from the Student Side

Additionally, the platform enables direct communication between supervisors and students through integrated messaging features, including WhatsApp connectivity for S1 and S2 coordination. The application also allows supervisors to set up a webinar for virtual meetings, enabling a student and both supervisors to discuss the proposal/thesis draft synchronously. The interface showcases various proposal stages and submission-tracking capabilities, culminating in the opportunity for students to proceed to Proposal Seminar registration once both supervisors have approved the proposals, thereby ensuring a comprehensive quality-assurance process throughout the proposal development phase.

1.3. Thesis Supervision Process on the Supervisor's Side

Figure 5 displays the Supervisor Dashboard interface within the BIMON system, which provides comprehensive features to support the postgraduate student supervision process. This dashboard enables supervisors to create webinars to schedule synchronous meetings, download student-submitted documents, generate supervisory brief notes, and upload documents required for feedback during the supervision process. The system also integrates chat features that facilitate direct interaction between supervisors and students via messaging, enabling supervisors to provide continuous feedback, guidance, and supervision. The interface demonstrates various stages of supervision, ranging from proposal seminars to thesis defences, with each stage incorporating precise tracking and documentation mechanisms. In short, this web-based thesis supervision application enables supervisors to effectively monitor students' academic progress and provide targeted guidance throughout their research journey.

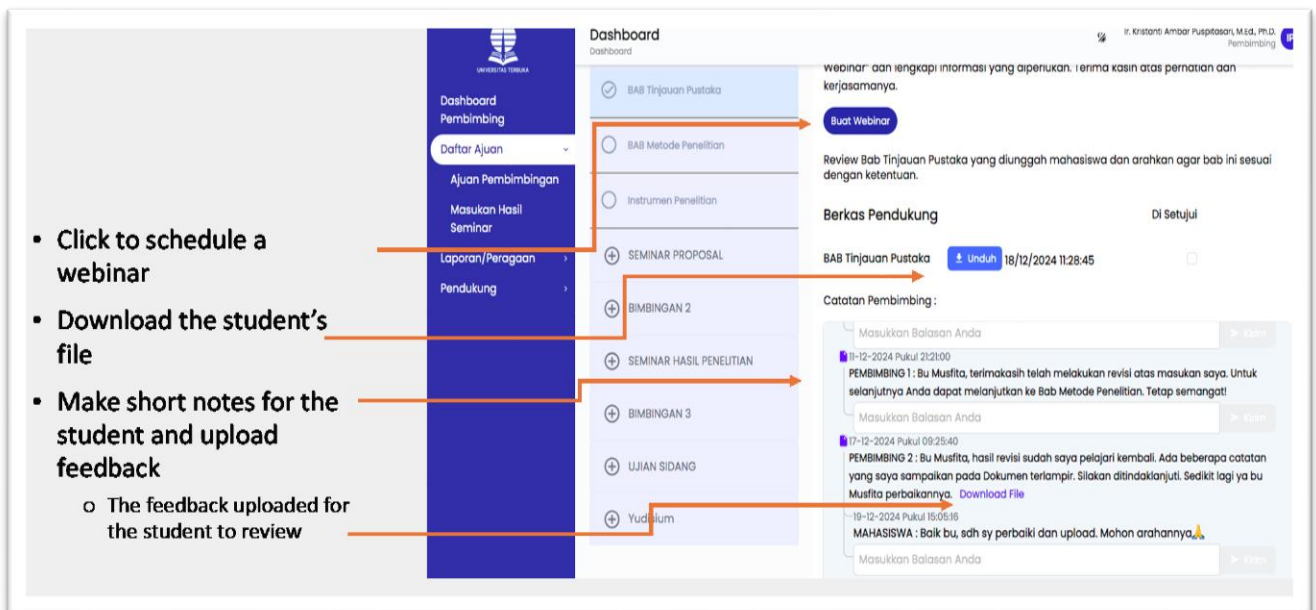


Figure 5. BIMON Application View from the Supervisor Side

1.4. Research Questions

This study provides the first dual-perspective evaluation of BIMON in an Indonesian ODL setting. It examines both student and supervisor experiences after two semesters of implementing the BIMON. The research aims to answer:

- RQ1. What advantages do users perceive in BIMON?
- RQ2. What challenges do they report?
- RQ3. What improvements do they suggest for an online supervision system?

2. Literature Review

2.1. Transactional Distance and the Student–Supervisor Relationship

Michael G. Moore's Transactional Distance Theory (TDT) (1973) remains a foundational framework for understanding communication and psychological gaps in distance education (Abuhasna & Alnawajha, 2023; Charles & DeFabiis, 2021; Falloon, 2011; Mahlangu, 2018). The theory posits that transactional distance results from three interrelated variables: dialogue, structure, and learner autonomy. High levels of dialogue and flexible instructional structures can

reduce this distance, whereas rigid structures and limited communication increase it, requiring greater learner autonomy (Moore, 1993).

In the Open and Distance Learning (ODL) context, this theory is directly applicable to the student–supervisor relationship. Physical separation can create psychological distance and communication barriers, potentially leading to misunderstandings during the thesis supervision process (Mahlangu, 2021). Applying TDT to supervision, Charles and DeFabiis (2021) demonstrated that well-structured support systems—such as advisor–student interactions—can reduce psychological gaps and improve engagement. Similarly, the BIMON platform serves as a technological mediation tool that bridges the psychological and physical distance between students and their supervisors, fostering dialogue and providing structural flexibility, thereby reducing transactional distance and strengthening student–supervisor communication.

2.2. Technological Mediation in Online Supervision

Providing technology to support student learning can bridge the psychological and physical distances students experience in a distance-learning environment. During the COVID-19 pandemic, many institutions closed down their campuses and adopted online supervision strategies to maintain academic continuity (Fendi et al, 2021). This shift toward digital platforms marks a global trend in which universities are increasingly turning to them to support self-learning and interactive engagement. Digital tools such as Skype, Microsoft Teams, Zoom, and Google Meet have become essential for synchronous interaction, while platforms like Microsoft SharePoint support collaborative writing and file sharing (El Madani et al., 2024; Lando & Wambua, 2025; Maor & Currie, 2017).

From the perspective of TDT, such tools increase dialogue and flexibility, both of which are critical for reducing transactional distance. When used effectively, technology can create a virtual space in which supervisors provide continuous feedback and students maintain autonomy over their research progress. In addition to reducing the geographical distance between students and supervisors, the BIMON platform also reduces the psychological distance that promotes interpersonal relationships, thereby reducing transactional distance and strengthening student–supervisor communication.

2.3. Institutional Adoption and the Student–Supervisor Dynamic

Structured supervision systems have been adopted globally to enhance digital mentoring, which is similar to online supervision and support. Several universities have reportedly successfully implemented digital platforms to enhance the supervision process. For example, Stockholm University implemented an e-learning management system called SciPro, which stands for Supporting the Scientific Process (Hansen & Hansson, 2015; Karunaratne, 2017). The system can successfully support the thesis process for both undergraduate and graduate students. It offers structured supervision through digital tracking, submission, and feedback mechanisms, making it a valuable tool that supports student-supervisor interaction, progress tracking, and peer review. The system helped the university improve thesis quality and reduce dropout rates (Karunaratne, 2017). In a more recent study, Lando and Wambua (2025) reported that the implementation of the Thesis Management System at Daystar University, Kenya, to monitor supervisor responsiveness and streamline thesis feedback had improved communication between students and supervisors and reduced delays in thesis progress.

Additionally, El Madani et al. (2024) described the use of an online learning platform for supervising master's students at Moulay Ismail University, Morocco. The study found a significant correlation between online supervisory feedback and student achievement, while also emphasizing the need for technical training to enhance effective engagement. Abhari et al. (2019) reported the development of a thesis tele-supervision system, comparable to online supervision, designed for postgraduate medical students. The system integrates communication and file-sharing facilities that

allow students and supervisors to sign in, read/view materials, submit and edit work, and engage in both online and offline chats. In 2019, Almeatani et al. reported the implementation of a mobile-based Thesis Supervision System (TSS) at King Abdulaziz University in Saudi Arabia. The TSS was designed to enhance communication and monitoring between graduate students and their advisors. The results of usability testing indicated that the master's students were highly satisfied and perceived that the TSS supported timely thesis completion. Another example, a Malaysian university has implemented an online student supervision management system (OSSMS), which enables efficient communication, document exchange, and progress tracking between students and supervisors (Mahdi et al., 2013).

These examples collectively highlight how structured digital environments can operationalize the dialogue and structure dimensions of TDT to support adequate supervision. Likewise, the BIMON platform provides a structured digital environment for both students and supervisors to communicate and discuss the progress of the thesis writing process. The web-based platform fosters dynamic interaction between the student and the supervisor.

2.4. Best Practices for Effective Online Supervision

Technology adoption alone is insufficient for adequate supervision. Institutions that integrate clear policies, training, and supervision guidelines demonstrate better outcomes. The previous research has shown that with dedicated tools for interaction and collaboration, an online supervision platform can enhance user experience and engagement. Both supervisors and students can benefit from a platform specifically designed for thesis supervision, which is better than using general communication apps like WhatsApp or email. The universities that provide a comprehensive guideline outlining strategies for adequate online supervision include the University of Florida, the University of Otago, and the University of Durham. These universities have implemented comprehensive frameworks that emphasize communication, relationship-building, and expectation management in online supervision (Kumar et al., 2020). Such cases collectively underscore the importance of aligning technological solutions with user needs, providing adequate training, providing guidelines, and fostering interactive supervision environments to ensure successful digital transitions.

These institutional strategies align closely with TDT's emphasis on increasing dialogue and autonomy, ensuring that both students and supervisors can engage productively in digital spaces. Such practices not only reduce transactional distance but also promote consistency in communication and clarity in supervisory roles—factors essential in ODL environments, where asynchronous interaction predominates. For the same reason, the BIMON provides a user manual and guidelines for proposal and thesis writing, and conducts socialization sessions for both students and supervisors. The Graduate School also conducts brief training sessions on the BIMON for administrators and technical staff in the programs of study and regional offices.

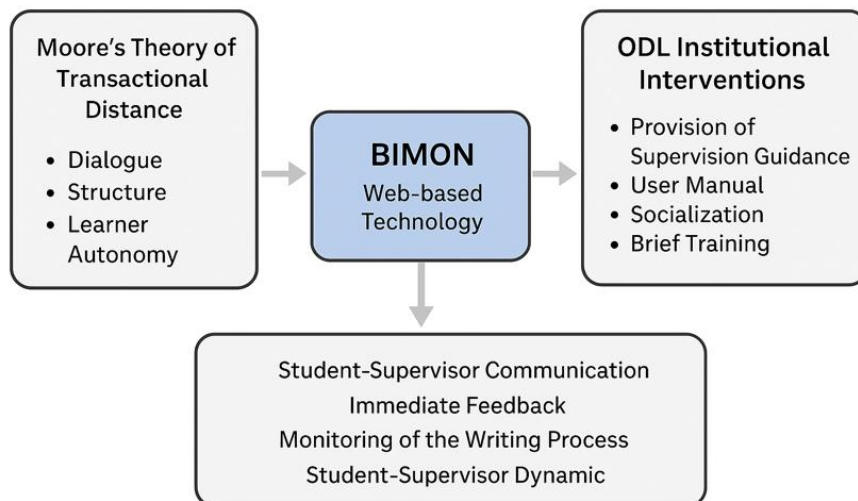


Figure 6. The Relationship between the Transactional Distance Theory, BIMON, ODL Institutional Interventions, and the Student-Supervisor Relationship

2.5. Challenges in Digital Supervision

Despite promising developments, past studies reported that several challenges persisted in the implementation of online supervision. Reported barriers include inadequate digital literacy and limited infrastructure (Nurkamto et al., 2022), communication difficulties, and a sense of isolation (Kumar et al., 2020). El Madani et al. (2024) emphasized the need for technical training to enhance effective engagement. Time management and supervisor availability issues also remain common (Djatmika et al., 2021). Furthermore, differences in student readiness and diversity across programs can intensify transactional distance (Zaheer & Munir, 2020). In addition, Ferreira-Meyers (2022) found that although supervisors at an African higher education institution found online supervision practices helpful, many still prefer traditional face-to-face approaches. Supervisors acknowledged the benefits of greater flexibility and accessibility, challenges such as limited infrastructure, internet connectivity, and digital competence persisted.

These obstacles underscore that reducing transactional distance in digital supervision is not solely a technological issue but also a pedagogical and relational one. Supervisors must intentionally foster dialogue, adapt supervision structures, and empower student autonomy to sustain engagement in online contexts.

2.6. Synthesis and Research Gap

Existing studies collectively affirm that digital platforms can enhance the effectiveness of supervision when designed around TDT's three dimensions—dialogue, structure, and autonomy. However, most prior research focuses on one stakeholder group, either students or supervisors, resulting in an incomplete understanding of the dynamics of supervision in ODL. Additionally, there is limited empirical evidence from Southeast Asian contexts, where access to technology and institutional capacity vary widely.

This study addresses these gaps by examining the implementation of BIMON at Universitas Terbuka, Indonesia, a country in Southeast Asia with a population of over 280 million. By analyzing both student and supervisor perspectives, this study explores how an integrated digital platform can mediate transactional distance and enhance communication, feedback, and monitoring in ODL thesis supervision.

3. Methodology

This study was part of the evaluation process for BIMON's first-year implementation. This study used a parallel online survey administered to students and supervisors during the academic year 2024/2025, in which quantitative and qualitative data were collected simultaneously but analyzed separately. This approach was selected to gain a comprehensive understanding of the thesis supervision phenomenon from multiple perspectives, namely graduate students and thesis supervisors. The primary focus of the study lies in the qualitative analysis of open-ended responses, aimed at deeply exploring the perceptions, experiences, and views of both participant groups regarding the thesis supervision process. The concurrent parallel design was chosen as it allows researchers to gather data from two distinct perspectives simultaneously, provides flexibility in data analysis, and facilitates data triangulation to enhance the validity of research findings. This approach aligns with the complexity of higher education phenomena that require insights from multiple perspectives to achieve a holistic understanding.

3.1. Research Participants

The target population of this study comprised graduate students and thesis supervisors at Universitas Terbuka during the 2024–2025 academic year. As stated in the cover letter, the study participants have consented by completing the online survey as part of the formative evaluation of the BIMON platform. All participants' data were protected and remained confidential. A total of 131 participants took part in the study, comprising 72 graduate students and 59 thesis supervisors, all of whom volunteered. This sample was considered representative in providing a comprehensive picture of the dynamics of thesis supervision in an open higher education context. A purposive sampling technique was employed, as the selected participants had direct, relevant experience with the research topic. For graduate students, the inclusion criteria were being an active student currently undergoing thesis supervision or having completed a thesis within the past year, and being willing to participate voluntarily. For supervisors, the inclusion criteria were at least 2 years of experience supervising graduate theses, active engagement in supervision during the study period, and informed consent to participate.

Demographic information was collected to provide contextual depth in interpreting the findings. This included program of study, cohort year for students or supervisory experience for lecturers, academic status, and region of residence. Such information was important for understanding participant diversity and enabling a more nuanced analysis of the findings. The variety of participants across programs and geographic regions strengthened the study's representativeness and supported the generalizability of the findings in the context of open higher education in Indonesia.

3.2. Data Collection Methods

The data in this study were collected using two online survey instruments, one designed for each participant group: supervisors and students. The supervisor instrument consisted of 15 closed-ended Likert-scale questions and three open-ended questions that explored supervisory methods, challenges encountered, perceived strengths of the BIMON system, and suggestions for improvement. Meanwhile, the student instrument comprised 16 closed-ended Likert-scale questions and three open-ended questions designed to capture students' experiences of supervision, satisfaction levels, challenges faced, and recommendations for improvement.

Instrument development followed a systematic process informed by relevant literature and the context of open and distance higher education. Open-ended questions were included to enable participants to freely articulate their perspectives, providing qualitative insights beyond the quantitative data. To ensure that the instruments accurately measure students' and supervisors'

experiences using BIMON, a professor in the field of research and evaluation assessed the face and content validity of the instruments.

Data collection was carried out via a secure, user-friendly online survey platform accessible on multiple devices, including desktop computers, laptops, tablets, and smartphones. The distribution process involved official institutional emails, the university's online learning platform, and coordination with relevant study programs. The survey was open during the even semester of the 2024–2025 academic year, ensuring sufficient coverage and flexibility for respondents. Response rates were regularly monitored, with reminders issued to prospective participants to encourage completion. Data security was maintained through automated backups and encryption.

A total of 72 students and 59 supervisors participated in the study. The students came from nine different study programs, with 32 residing on Java Island, where the capital city is located, and 40 domiciled outside Java. Supervisors reported supervising between 1 and 10 students, with the majority (78%) supervising between 1 and 6 students. Table 1 presents the distribution of student participants by program of study, with the largest groups from the Master of Management (25 students) and Master of Basic Education (24 students).

Table 1. Study Programs of Students (N=72)

Programs of Study	Number of Students
Master of Law	1
Master of Public Administration	7
Master of Management	25
Master of Fishery Management	1
Master of English Education	2
Master of Basic Education	24
Master of Early Childhood Education	7
Master of Mathematics Education	3
Master of Environmental Studies	2
Grand Total	72

As shown in Table 1, the distribution of students across study programs was uneven. The highest representation came from the Master of Management (34.7%) and Master of Basic Education (33.3%), which together accounted for more than two-thirds of all participants. In contrast, some programs had very low representation, such as the Master of Law and Master of Fishery Management, each with only one student respondent. This variation in participation reflects the differing sizes of student populations across study programs and provides important context for interpreting the study's findings. Students in the Master of Management and Master of Basic Education programs represent the two programs of study with the largest number of enrollments in UT's Graduate School.

The analysis in this article focuses particularly on responses to the open-ended questions. Students were asked to elaborate on (1) the advantages of the BIMON application, (2) the problems they encountered when using the application, and (3) their suggestions for improvement. These responses were subsequently categorized into themes that form the basis of the thematic analysis.

3.3. Data Analysis

The study employed a qualitative approach with thematic analysis to identify key patterns in open-ended responses, complemented by comparative analysis to contrast students' and supervisors' perspectives and reveal similarities and differences. Data analysis was conducted inductively through six systematic stages: transcription and data cleaning, familiarization through repeated reading, initial line-by-line coding, grouping of codes into themes and sub-themes, visualization of relationships among themes through mind mapping, and systematic documentation in a verifiable audit trail. The analysis focused on three main categories: perceived advantages, implementation challenges, and improvement recommendations, with in-depth exploration of sub-themes within each category. Validity was ensured through transferability, strengthened by detailed contextual descriptions and thick description, and audit trails, maintained through systematic documentation and traceability of the analytic process by all researchers. The data analysis process is presented in Figure 7.

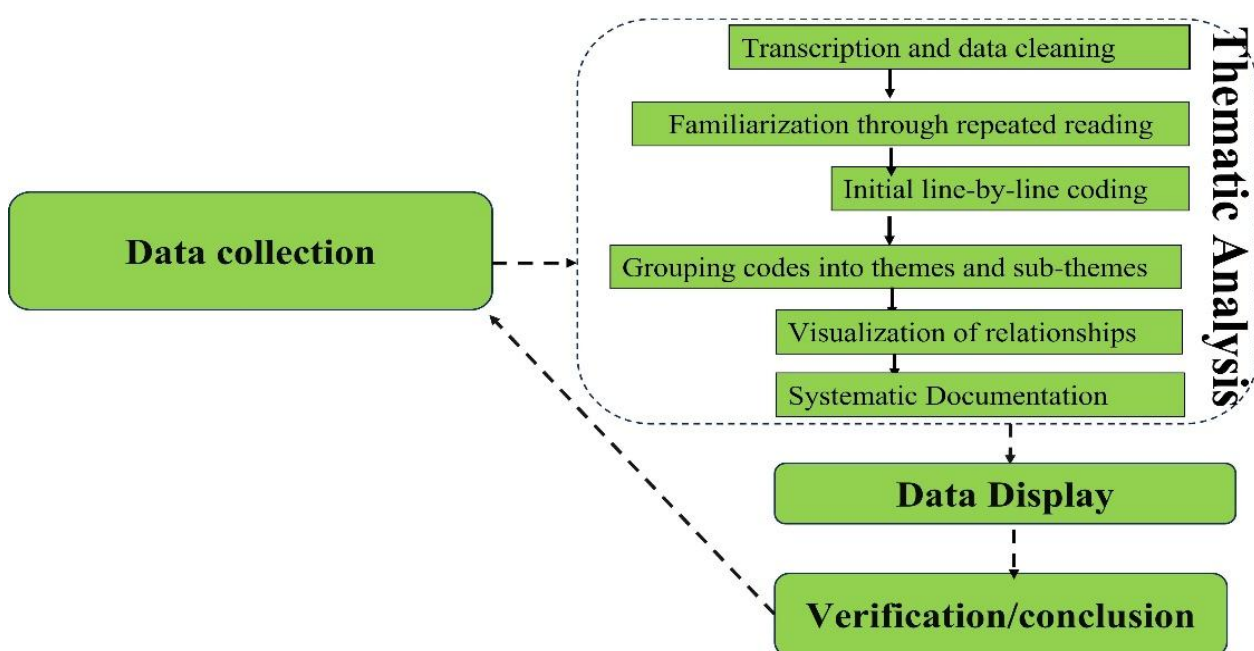


Figure 7. Data analysis process

4. Results

4.1. Perceived Advantages of the BIMON Application in Bridging Distance in Academic Mentoring

Based on responses from 72 students and 59 supervisors who voluntarily participated in the survey, the BIMON application offers several advantages for distance thesis supervision at Universitas Terbuka. Table 2 summarizes the perceptions of both respondent groups regarding the perceived advantages of the BIMON.

Table 2. Perceived Advantages of the BIMON Application in Bridging Distance in Academic Mentoring

Category	Students (n=72)	Supervisors (n=59)
Efficiency and Effectiveness	Efficient and effective thesis supervision (25%)	Monitoring thesis progress (25%)
Supportive Features	Helpful features: templates, guidelines, progress indicators, seminar registration (18%)	Feedback tracking (15%)
Communication	Facilitates communication and feedback with supervisors (18%)	Facilitates communication (12%)
Accessibility	Easy to use and access (14%)	Easy access and use (19%)
Time Management	Helps manage time (10%)	–

Table 2 indicates that students and supervisors perceived the most prominent advantage of BIMON to be the efficiency and effectiveness of the supervision process. On the other hand, only students who found the BIMON platform helped them manage their time for thesis work.

Subsequently, the advantages of the BIMON application for bridging distance in academic mentoring are presented in Figure 7, based on the thematic analysis. Five main themes were identified that reflect students' and supervisors' perceptions of the advantages of the BIMON application in bridging distance in academic mentoring, namely efficiency and effectiveness, supportive features, communication, accessibility, and time management. These themes emerged from responses from 72 students and 59 supervisors who voluntarily shared their views on their experiences using BIMON in thesis supervision at Universitas Terbuka.

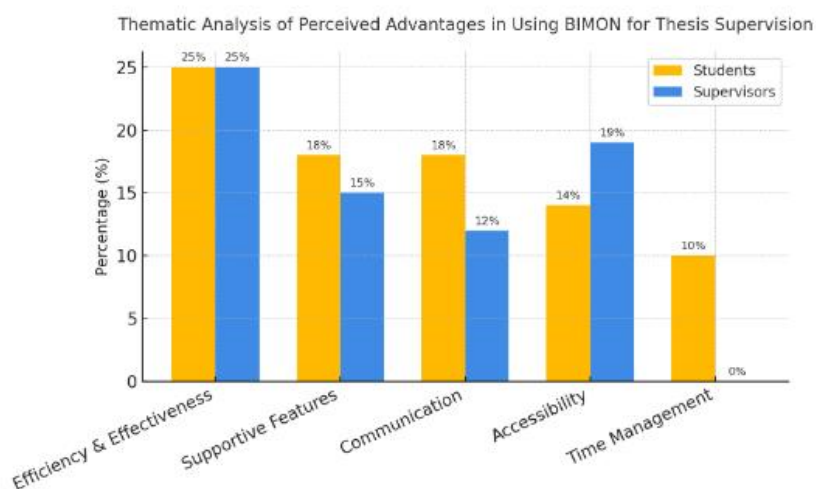
**Figure 8.** Thematic Analysis Results on the Perceived Advantages of Using BIMON

Figure 8 illustrates how the implementation of BIMON aligns with Moore's Transactional Distance Theory (TDT) by addressing its three key elements—dialogue, structure, and learner autonomy—to reduce the psychological and communication gap in distance supervision. The increased efficiency and effectiveness highlighted by both students and supervisors (25%) reflect a

strengthening of structure, indicating that supervision is becoming more structured and productive, reinforced by the monitoring features. The theme of supportive features was also noticeable (students 18%, supervisors 15%), recognizing the benefits of templates, guidelines, progress indicators, and valuing the function of feedback tracking.

The emphasis on communication (students: 18%, supervisors: 12%) demonstrates an enhanced dialogue, fostering closer interaction and reducing the isolation typically found in ODL environments. Moreover, the themes of accessibility (students, 14%; supervisors, 19%) and time management (students, 10%) signify increased learner autonomy, as students gain flexibility and control over their learning schedules. Accessibility underscored the ease of use and access across devices and regions, which is highly relevant to Universitas Terbuka's open and distance learning system. Time management showed that students experienced greater flexibility in arranging supervision schedules without the need to be physically present on campus. Collectively, these themes demonstrate that BIMON serves as a pedagogical bridge, operationalizing TDT principles and fostering a more responsive, supportive, and effective student–supervisor relationship within Universitas Terbuka's digital supervision ecosystem.

Here are examples of supervisors' responses:

- “I can track the sequence and timeliness of submissions, because BIMON records the date and time of each file uploaded by the student. BIMON also saves all of the feedback, enabling the revisiting of previous feedback for future reference. Also, BIMON enables both supervisors to view each other's feedback.”
- “The supervision process becomes structured and easy to monitor.”
- “Very easy to use, the features are not complicated.”

Here are examples of students' responses:

- “Via BIMON, it is easy to make improvements based on supervisor input.”
- “The application is user-friendly, and the supervision process is very effective.”
- “Easy to use.”

4.2. Perceived Challenges in Online Thesis Supervision through the BIMON Application

Based on survey responses from 72 students and 59 supervisors who voluntarily participated, several challenges in the BIMON application for bridging distance in thesis supervision at Universitas Terbuka were identified. The key perceptions reported by both groups who completed the open-ended question on the problems encountered when using BIMON are summarized in Table 3.

Table 3. Problems Encountered in the Use of the BIMON Application for Thesis Supervision

Category	Students (n = 72)	Supervisors (n = 59)
Feedback and Responsiveness	<ul style="list-style-type: none"> ○ Slow supervisor feedback (28%) ○ Long wait times for supervisor feedback and seminar scheduling (18%) 	<ul style="list-style-type: none"> ○ Student-related issues: late responses, feedback misunderstandings, inactive co-supervisors (17%)
Access Issues	<ul style="list-style-type: none"> ○ Internet problems, password errors, maintenance, file upload issues (17%) 	<ul style="list-style-type: none"> ○ Server errors, network problems, file saving issues (31%)
Communication Preferences	<ul style="list-style-type: none"> ○ Supervisors preferred WA/Zoom over BIMON (24%) 	<ul style="list-style-type: none"> ○ Preference for WA due to immediacy (24%)

Category	Students (n = 72)	Supervisors (n = 59)
Feature Limitations	○ Lack of notifications, unclear approval buttons (18%)	○ Missing features: thesis title visibility, meeting notifications, supervisor forums (10%)
No Problems Encountered	○ No obstacles reported (24%)	○ No problems encountered (25%)

The thematic analysis of the challenging features of the BIMON application in bridging distance in academic mentoring is presented in Figure 9.

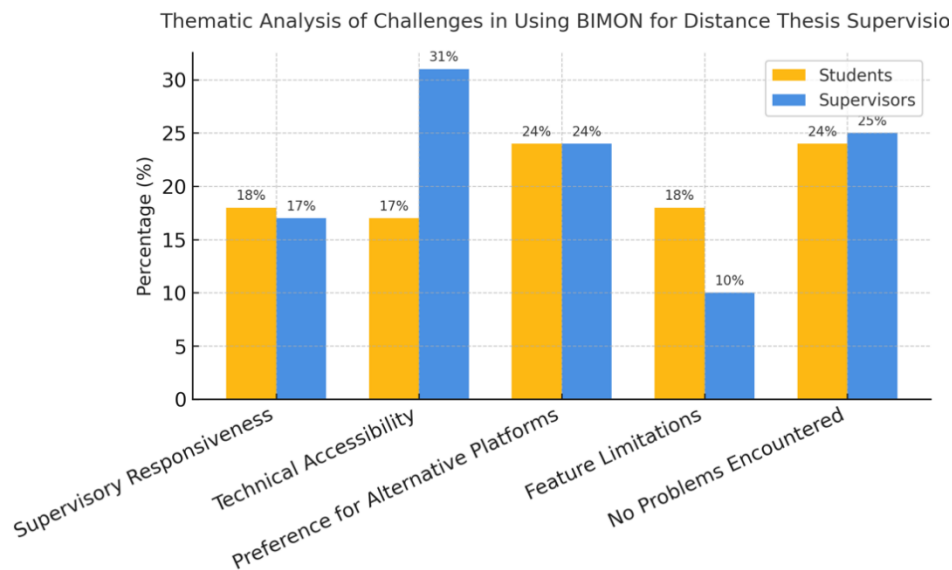


Figure 9. Thematic Analysis of Reported Challenges in Using the BIMON Application for Online Thesis Supervision

Based on the survey responses from both respondent groups, several themes emerged regarding the challenges of using the BIMON application for distance thesis supervision. The identified themes include supervisory responsiveness, technical accessibility, preference for alternative platforms, feature limitations, and no problems encountered.

Figure 9 illustrates the challenges reported by students and supervisors in using the BIMON platform, which can be interpreted through Moore's Theory of Transactional Distance (TDT), highlighting the interplay of dialogue, structure, and learner autonomy in distance education. The recurring issue of supervisory responsiveness (students: 28%, supervisors: 17%) reflects gaps in dialogue and highlights how delays in feedback increase transactional distance and weaken student engagement. Similarly, technical accessibility problems (students: 17%, supervisors: 31%) and feature limitations (students: 18%, supervisors: 10%) indicate weaknesses in structure, as unreliable systems and unclear functions disrupt the flow of interaction and consistency in supervision. Interestingly, the number of supervisors who reported technical accessibility problems was almost twice that of students who encountered accessibility issues. Problems occurred mostly due to poor network connectivity, server issues, and file-saving failures. This phenomenon could reflect that students are more accustomed to using digital tools than their supervisors. Regardless, these technical barriers underscore the need for a stable digital infrastructure to support smooth supervision processes.

The preference for alternative platforms, such as WhatsApp and Zoom (both at 24%), suggests that users desire tools that foster more immediate communication and flexible interaction,

reinforcing the need for technological structures that better support dialogue and autonomy. Additionally, 18% of students cited BIMON's limited features, including the absence of notifications and unclear approval buttons, while 10% of supervisors highlighted the lack of essential functions, such as virtual meeting notifications and supervisor forums. These challenges suggest that system design improvements and greater socialization of the application's functions are necessary to better meet users' needs.

On the other hand, 24-25% of both students and supervisors reported no difficulties when using BIMON. These distinct perceptions showed that while a considerable number of BIMON's users seem more accustomed to digital tools, others still need clear guidance or access to the online supervision platform. Overall, these challenges highlight the importance of efficient, stable, easy-to-use, and dialogic supervision systems in minimizing transactional distance during BIMON's implementation.

Here some examples of supervisors' responses:

- "Students sometimes struggle to understand what their supervisor suggests in feedback, which can differ from the input provided during face-to-face advising sessions."
- "Access to the BIMON platform cannot be done via a mobile phone."
- "I never use the BIMON platform."

Here are some examples of students' responses:

- "The application is currently unavailable due to maintenance, despite my desire to get supervised."
- "The application is good, but the supervisor is still slow to respond."
- "Still use WhatsApp for supervision process."

4.3. Students' and Supervisors' Suggested Improvements for the BIMON Online Thesis Supervision

Responses from 72 students and 59 supervisors who voluntarily participated in the survey and completed the open-ended question on suggestions indicated several areas for improvement in the BIMON application for thesis supervision at Universitas Terbuka. The key perceptions reported by both groups are summarized in Table 4.

Table 4. Suggested Improvements of the BIMON Application Based on Survey Responses of Students and Supervisors

Category	Students (n = 71)	Supervisors (n = 59)
Feature Enhancement	Enhance features: notifications, scheduling, reminders, performance (43%)	Add notifications for uploads, meetings, and chat features (59%)
Complementary Use	BIMON meets needs; WA/email used complementarily (28%)	Prefer synchronous supervision via WA/email (10%)
Socialization & Training	Increase socialization and training for all users (19%)	Mobile version, regular socialization, and training (25%)
Responsiveness	Improve supervisor responsiveness and provide individual meetings (19%)	Current features are satisfactory (15%)

This figure presents users' perspectives on improving the BIMON platform, interpreted through Moore's Transactional Distance Theory (TDT). The highest-rated theme, Features Enhancement (students 43%, supervisors 59%), reflects the need to strengthen the structure of the BIMON by improving system design, automatic notifications, and an interactive tool that supports more systematic and transparent supervision. Specifically, users sought timely alerts, reminders, and enhanced system performance to facilitate smooth communication and progress tracking in online thesis supervision.

The theme of Complementary Use (students 28%, supervisors 10%) highlights users' continued reliance on alternative communication channels, such as WhatsApp or email, to foster dialogue and immediacy—key factors in reducing transactional distance. These suggestions indicate that, while BIMON provides essential functionalities, it has not yet entirely replaced established communication channels.

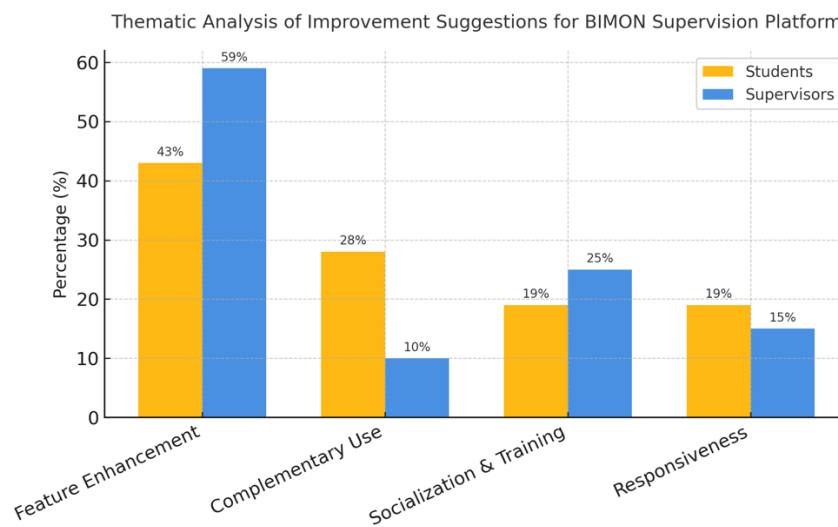


Figure 10. Thematic analysis of suggested improvements for the BIMON platform

The theme Socialization & Training (students 19%, supervisors 25%) underscores the need for institutional support in building digital competence and confidence, which enhances learner autonomy and promotes active engagement in the supervision process. These wishes suggest that both students and supervisors stressed the importance of training, socialization, and the development of a mobile version to ensure effective platform adoption and user confidence.

Finally, the theme Responsiveness (students 19%, supervisors 15%) highlights the continuing importance of timely, personalized interaction, reinforcing that technological improvements must be complemented by strong human communication to minimize psychological and transactional gaps in ODL supervision. This finding reinforces that sustained dialogue remains vital for reducing psychological distance in ODL. Students highlighted the need for supervisor responsiveness and individual meetings with the supervisor, pointing to the inherently relational nature of academic supervision despite technological mediation.

Here are some supervisors' suggestions:

- "The existing features are sufficient; it would be more effective if a notification component were integrated with the BIMON via WhatsApp."
- "The platform needs a notification to students when the supervisor schedules a webinar."
- "Needs notifications when students upload a file."

Here are some students' suggestions:

- “Notification is needed to students via WhatsApp if the supervisors provide feedback.”
- “There needs to be a response deadline and a reminder/notification to supervisors/students if it is exceeded.”
- “Wish supervisors could respond more quickly to motivate students.”

5. Discussion

5.1. *Perceived Advantages of BIMON in Reducing Transactional Distance*

The findings indicate that BIMON effectively supports the supervision process by enhancing structure, dialogue, and learner autonomy—three key dimensions of Moore’s Transactional Distance Theory (TDT). Both students and supervisors emphasized efficiency and effectiveness (25%) as the most significant advantages, suggesting that BIMON strengthens the structure of supervision through systematic tracking, clear submission timelines, and transparent feedback documentation. This structured approach minimizes ambiguity in expectations and ensures a more organized mentoring process.

The divergence findings wherein supervisors valued BIMON's capacity for systematic progress monitoring, while students prioritized its communication and feedback features, align with the TDT, which posits that psychological distance in online learning can lead to misunderstandings between students and supervisors (Moore, 1993; Falloon, 2011; Mahlangu, 2021). By enabling continuous interaction and structured supervision, BIMON serves as a mediating tool to reduce transactional distance and strengthen relational presence within the supervision process. From a TDT perspective, such structural reinforcement reduces transactional distance by providing clarity and predictability in interactions, thereby enhancing cognitive engagement. To sustain this strength, Universitas Terbuka should continue developing and improving structured monitoring dashboards that visualize progress milestones and enable automated reminders for both students and supervisors.

The second major theme—supportive features (students 18%, supervisors 15%)—demonstrates BIMON’s ability to facilitate both procedural and content-related support. Templates, guidelines, and feedback records not only increase usability but also act as scaffolding tools that promote dialogue and reflection. These features enhance perceived usefulness and satisfaction, which support Ismail et al. (2011) who claims that effective supervisor–student relationships are central to research success. Consistent with findings from the Technology Acceptance Model (TAM), perceived usefulness, ease of use, and service quality remain critical predictors of acceptance (Davis, 1989; Liu & Yu, 2023; Selim, 2003; Yeou, 2016). However, contextual factors also influence how these constructs shape adoption in higher education settings (Granić & Marangunić, 2019; Scherer et al., 2019).

As both students and supervisors in Indonesia are new to the online supervision process, even those with experience in online learning, the university must regularly socialize the BIMON. In addition, to enhance the acceptance of BIMON, the socialization of templates, guidelines, and other relevant provisions must be conducted in various modes using every available medium, so that both students and supervisors feel familiar with the platform and confident in using it for the supervision process.

The emphasis on communication (students: 18%; supervisors: 12%) aligns directly with TDT’s second construct—dialogue. Improved feedback exchange and transparent communication channels mitigate psychological isolation, a common challenge in distance education. Training programs that focus on effective digital communication and feedback strategies are therefore recommended to sustain this positive culture of interaction. Enhancing adaptive feedback features and integrating real-time communication tools, such as WhatsApp and other digital platforms, could further strengthen

dialogic interaction and the immediacy of feedback. Empirical studies indicate that in blended e-learning systems, learning styles and prior technology experience significantly influence perceived usefulness and behavioral intention (Al-Hawari & Samar, 2010). Within this context, BIMON functions as a technological instrument designed to bridge physical disparities and reduce communication gaps in the supervision process, aligning with systematic efforts to minimize transactional distance.

Accessibility (students 14%, supervisors 19%) and time management (students 10%) highlight the enhancement of learner autonomy, the third pillar of TDT. The flexibility to access BIMON from multiple devices and manage supervision schedules independently empowers learners to take greater responsibility for their progress. Technological barriers and a lack of institutional support can negatively impact students' willingness to engage with ODL technologies, even when perceived usefulness and ease of use of the technologies introduced are high (Sharif-Nia et al., 2023; Reyes-Millán et al., 2023).

Overall, the results indicate that BIMON effectively fosters engagement, feedback exchange, and academic support, thereby enhancing the efficiency of supervision. Thus, the perceived advantages of BIMON confirm its pedagogical alignment with TDT, functioning not merely as a management tool but as a catalyst for meaningful academic interaction. To fully leverage these advantages, further development should focus on improving interface usability, integrating adaptive feedback mechanisms, and providing targeted training for both students and supervisors. Through continuous refinement of structure, dialogue, and autonomy-supportive design, Universitas Terbuka can further consolidate BIMON as an effective model for digital supervision in open and distance learning environments.

5.2. Challenges of BIMON Implementation and Implications for Transactional Distance

The findings on the second open-ended question point to different challenges in the use of BIMON for thesis supervision, which can be interpreted through the lens of TDT. These challenges mostly relate to deficits in dialogue, structure, and learner autonomy, thus increasing transactional distance.

For the first theme, supervisors (17%) and students (18%) reported delays or breakdowns in the supervisory responsiveness feedback loops. The lack of immediacy of supervisory responses undermines dialogue, which is central to lowering transactional distance. This finding is consistent with similar research at Daystar University in Kenya, where graduate students using a Thesis Management System also reported dissatisfaction with delayed supervisor responses (Lando & Wambua, 2025). As Vealé (2009) has shown, limited interactive communication is a key factor in elevated transactional distance. Students (28% of student respondents) reported receiving delayed feedback from supervisors. In contrast, some supervisors indicated that co-supervisors' unresponsiveness could significantly hinder students' academic progress. Evan & Stevenson (2010) revealed that the quality and nature of the supervision relationship, such as structured supervision and a warm environment, are the most critical factors influencing the learning experience of UK doctoral students in online thesis supervision. This observation aligns with Computer-Mediated Communication (CMC) theory, which posits that the effectiveness of digital communication depends primarily on user motivation, knowledge, and the ability to strategically optimize various technological features (Spitzberg, 2006). The predominance of written communication in online supervision contexts may result in misunderstandings and interpretive ambiguities, confirming Ensher et al. (2003) that CMC-based relationships require extended durations to develop and face inherent challenges in providing adequate psychosocial support.

In this case, Universitas Terbuka needs to ensure that all students and supervisors are aware of the supervision timelines so that all parties will adhere to the supervision timeframe. Furthermore, the BIMON needs to improve student and supervisor responsiveness by providing WhatsApp alerts

for immediate feedback. Additionally, the university must establish interventions for students, such as providing workshops or training in both academic writing and written communication for purposes beyond academic writing, including communicating with their supervisors. These trainings would help students improve their writing competence, boosting their self-confidence. Empirical studies in online education platforms confirm that system quality, information quality, and service quality are critical determinants of continued usage intention (Zhou et al., 2022).

For the second theme, technical competence and access issues, some participants (students: 17%; supervisors: 31%) lacked sufficient digital literacy, stable internet access, or compatible devices. These problems reflect barriers to learner autonomy—when students or supervisors are unable to self-regulate their tasks, efficient supervision is hampered. For example, studies of distance learning highlight how access issues correlate with increased transactional distance (Falloon, 2011). More supervisors are having problems with the technology than the students. When supervisors are reluctant to use new technologies, Indonesian students will usually have no choice but to use the tools preferred by their supervisors.

In this case, reluctance to use new technology may stem from unfamiliarity with BIMON. Thus, the university must make numerous efforts to reach students and supervisors who never attend any BIMON socialization events or require additional briefing to familiarize themselves with the platform. Additionally, the university must provide tutorials for using BIMON in various media, involving students and supervisors who have successfully utilized this platform in the supervision process. Also, a user-experience review of BIMON can be conducted to eliminate unnecessary steps, simplify workflows, and incorporate intuitive dashboards. Furthermore, Universitas Terbuka needs to ensure that recruitment of supervisors from partner universities gives their consent to supervise students using the online supervision platform. Consequently, only supervisors who are willing to learn new technologies or are accustomed to using digital tools can be considered.

For the third theme, preference for alternative platforms, the findings highlight a substantial reliance on alternative communication platforms, with a consistent preference for WhatsApp or Zoom among students (24%) and supervisors (24%). They continued to use familiar platforms like WhatsApp and Zoom because they are not yet familiar with using BIMON. This signals increased structure in a negative sense as the system becomes rigid or cumbersome, which inhibits timely interaction. In TDT terms, a high-rigidity structure without sufficient dialogue raises transactional distance (Best & Conceição, 2017). Supervisors' preference for WhatsApp and email, based on their immediate response capabilities, reflects a fundamental need for more spontaneous and informal communication that structured digital platforms like BIMON have yet to fully satisfy. Research on Moodle acceptance in blended learning identified instructor support, system accessibility, and prior experience as significant predictors of technology acceptance (Yeou, 2016). Therefore, integrating BIMON with familiar digital tools, such as WhatsApp, might satisfy the need for immediate communication with supervisors when students encounter difficulty in understanding the feedback.

For the fourth theme, feature limitations, the findings indicate usability challenges when using BIMON (students: 18%; supervisors: 10%). The challenges include the absence of notifications when supervisors upload feedback or schedule virtual meetings, inaccurate functions of certain application buttons, and prolonged waiting times for seminar registration approval. Supervisors also noted the lack of research titles on every application page and the absence of discussion forums among supervisors as limitations that disrupt their academic workflow. Empirical studies on usability factors in educational systems confirm that system navigation, feedback mechanisms, and user interface design significantly influence user satisfaction and continued usage (Nagy, 2018; Song & Kong, 2017).

However, the university's operational procedures demand that when students submit drafts through BIMON, supervisors automatically receive email notifications. The application also supports

virtual meeting scheduling using Microsoft Teams, Zoom, or Google Meet. Additionally, communication forums (chat features) have been provided, including chat forums among supervisors; between students and each supervisor; between students and all supervisors; and among all parties, including program study administrators and regional offices. Nonetheless, over 50% of supervisors, in response to question 3, recommended providing notification features, synchronous meetings, and chat functions—despite these features already being integrated into the BIMON system. The supervisors' criticisms indicate substantial underutilization of the BIMON features. It means that not all supervisors have thoroughly explored the available features or possess the necessary technical expertise to operate them optimally. These findings also indicate that not all supervisors regularly check their registered email, as notifications are automatically sent to it when students upload a file. Research on factors affecting e-learning acceptance reveals that computer self-efficacy and prior experience with similar technologies significantly influence perceived ease of use (Chang et al., 2012). Studies in the context of mobile learning (m-learning) confirm that instructor support and peer influence are critical external factors in determining technology acceptance (Gómez-Ramírez et al., 2019). Thus, the university must hold regular virtual meetings with students and supervisors every semester to introduce new features and institutional policies, in addition to sending information via emails and WhatsApp Groups.

Aside from the challenges experienced by both students (24%) and supervisors (25%) when using the BIMON platform, very encouraging findings also indicate that a large percentage of them had no difficulty using the BIMON for thesis supervision. Therefore, socialization of the BIMON can involve those who found the platform helpful and easy to use. Learning from peers might reduce anxiety and reluctance to use the new technology. Unfortunately, when the study was conducted, the application had already been released for one semester, so the study could not present the percentages of students who completed their thesis using this online supervision platform.

5.3. Recommendations for improving the BIMON platform

The findings from the third open-ended question result in recommendations from respondents for improving the BIMON platform. The recommendations can be categorized into four themes, namely feature enhancement, complementary use, socialization & training, and responsiveness.

The first theme demonstrates strong consensus regarding the urgency of feature enhancements (students: 43%, supervisors: 59%), explicitly emphasizing the need for optimized notifications, scheduling, and overall system performance. Specific usability challenges include the absence of notifications when supervisors upload feedback or schedule virtual meetings, inaccurate functions of certain application buttons, and prolonged waiting times for seminar registration approval. Supervisors also commented on the absence of discussion forums among supervisors, which they identified as a limitation that disrupts their academic workflow. Empirical studies on usability factors in educational systems confirm that system navigation, feedback mechanisms, and user interface design significantly influence user satisfaction and continued usage (Nagy, 2018; Song & Kong, 2017).

The second theme, complementary use, was recommended (students: 28%, supervisors: 10%) to highlight that some supervisors are satisfied with using WhatsApp or email for supervision activities due to their immediate response capabilities, leading to reluctance to learn alternative technological platforms. This reluctance to use BIMON reflects a common phenomenon in technology adoption: the perceived ease of existing tools can act as a barrier to adopting new technologies, even when such technologies offer more comprehensive and integrated features (Alruwais et al., 2017). Research on technology adoption behavior identifies habit, switching costs, and status quo bias as significant inhibitors of technology acceptance (Al-Rahmi et al., 2021).

The third theme, socialization & training, reveals that supervisors (25%) require more socialization on using the BIMON than students (19%). Computer anxiety (Shen et al., 2022),

technological barriers, and institutional support (Reyes-Millan, 2021) are important factors in the TAM, a theoretical model used to evaluate the use of new technology, including students' satisfaction (Shen et al., 2022). As well, a systematic review of artificial intelligence in education (AIEd) applications in higher education confirms that user experience and technical competency are critical success factors for the effective implementation of educational technologies (Zawacki-Richter et al., 2019). As confirmed by contemporary TAM studies, perceived ease of use and prior technology experience significantly predict user attitudes toward digital tools in educational contexts (Liu & Yu, 2023). Therefore, the university must consider providing more regular support, such as socialization and training in various media, to alleviate computer anxiety and enhance digital competence, thereby improving familiarity with using the BIMON. Nonetheless, a substantial proportion of students and supervisors reported having no difficulties in using the application, indicating heterogeneity in user experiences that must be considered in system development (Rafique et al., 2018). However, the recommendation to provide a mobile version of the BIMON may help reduce a substantial barrier to application adoption, particularly for those prioritizing convenience, immediacy, and optimal accessibility. Empirical studies in higher education show that mobile applications significantly enhance student engagement, retention, and academic achievement compared to web-based platforms (Pechenkina et al., 2017; Rafique et al., 2018).

Finally, the fourth theme, responsiveness, reveals that students (19%) desire more immediate feedback from their supervisors. On the other hand, several of the supervisors (15%) already feel satisfied using the BIMON platform. These findings are strongly relevant with Lando & Wambua (2025), showing that supervisors may require up to a month or more to respond. This finding also aligns with Zaheer & Munir (2020), who found that significant barriers in remote supervision include time constraints. Therefore, the university needs to set a clear timeframe for the supervision process.

6. Limitations of the Study

This study has several limitations that should be acknowledged. First, it was conducted within a single university context, which may limit the generalizability of the findings to other higher education institutions or cultural settings. Second, the reliance on open-ended questions in self-reported surveys introduces potential biases, including social desirability and recall bias. Third, the limited number of students representing all programs of study and all regional offices limits the generalizability of the findings across regions in Indonesia. Fourth, the study focuses primarily on specific BIMON functionalities, potentially overlooking broader aspects of the online supervision experience. Lastly, the cross-sectional design restricts the ability to examine longitudinal changes in technology acceptance and adaptation over time.

7. Conclusion

This study demonstrates that the BIMON platform is generally perceived as an efficient tool for thesis supervision by both students and supervisors, highlighting its potential to facilitate progress monitoring, efficient communication, and provide structured feedback. While there are similarities in perceptions of efficiency, students and supervisors also have different priorities. For example, supervisors focus on tracking students' academic performance. These findings can be interpreted through the TAM and Moore's TDT, illustrating how perceived usefulness, ease of use, and psychological distance shape adoption of new technology and utilization patterns.

Moreover, the study identifies substantial reliance on alternative communication platforms, underutilization of key features, and usability challenges, indicating that technological capabilities alone are insufficient without adequate user competence and engagement. The results suggest that effective online supervision requires not only system optimization—such as improved notifications, scheduling, mobile accessibility, and feedback mechanisms—but also alignment with user expectations, interaction preferences, and institutional practices.

8. Suggestion

It is recommended that the BIMON platform be enhanced with optimized notifications, scheduling, feedback tracking, and mobile accessibility to improve usability and reduce dependence on alternative communication tools. While the BIMON platform is being improved, the university must also provide institutional support, such as promoting BIMON through various media for both students and supervisors, and offering multiple training sessions.

Training and technical support should be provided to both students and supervisors to encourage the comprehensive use of the BIMON features. Adaptive supervision strategies that integrate flexible communication modes—both synchronous and asynchronous—can help minimize transactional distance. Additionally, providing a help desk, implementing continuous user feedback mechanisms, and conducting longitudinal, multi-institutional studies are recommended to ensure sustained improvements in online supervision and to validate the broader applicability of the findings.

Finally, this study reinforces the importance of integrating both technological and pedagogical considerations in the design and implementation of online supervision platforms to ensure meaningful, efficient, and user-centered academic support. Therefore, providing training for students in academic writing and research methodology could enhance students' confidence and competence in completing their thesis promptly, as thesis completion is a significant milestone in graduate programs.

Declarations

Author Contributions. Kristanti Ambar Puspitasari contributed to conducting the literature review, preparing the original manuscript, and finalizing the article manuscript. Sudirman aided in determining the methodology and is responsible for data analysis and contributing to the discussion section. Amalia Sapriati performed the data analysis and review of the manuscript. Ryan Hidayat helped in the editing of the manuscript. All authors have studied and approved to publish the final version of the article.

Conflicts of Interest. All of the authors have no conflict of interest in writing and disseminating the article.

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Ethical Approval. Ethical Considerations

This study received approval from the Universitas Terbuka Research Committee, ensuring that all ethical aspects were carefully considered and complied with according to established research standards. All participants provided digital informed consent before completing the survey, having been fully informed of the study's objectives, procedures, potential benefits, and possible risks. Voluntariness was the guiding principle in participant recruitment, with participation being entirely voluntary and free from any form of coercion or undue influence. Participants were informed of their right to withdraw at any time without any academic or professional consequences. No financial incentives were provided that could influence participation, ensuring that involvement was based solely on willingness. Confidentiality and anonymity of participants were strictly maintained. No personally identifiable information was traceable from the data, and all responses were stored confidentially with restricted access granted only to the research team. Data were stored and secured, and will be deleted after the designated five-year retention period in accordance with institutional policy. Transparency was upheld through a commitment to openly disseminate the research findings. The researchers declared no conflicts of interest, and the study was conducted with the highest standards of academic integrity. These ethical principles not only met formal

requirements but also reflected a strong commitment to respecting the rights and dignity of participants.

Data Availability Statement. All survey data is protected and kept safely under the responsibility of the authors.

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