International Conference on Teaching and Learning Proceeding
Faculty of Education and Teacher Training – Universitas Terbuka
UTCC, South Tangerang, Banten, June 25th 2024
Vol. 2, No. 1, pg. 1 – 8
ISSN: 3046-594X

THE DEVELOPMENT OF ONLINE THESIS SUPERVISION AT UNIVERSITAS TERBUKA

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Abstract: In recent years, especially since the COVID-19 pandemic struck, online learning has been implemented in higher education institutions. Despite the trend of many universities to implement online learning since the COVID-19 pandemic, the graduate school of Universitas Terbuka (UT) has been offering online classes since 2013. While student tutoring is integrated into the LMS with fixed schedules, the time for online thesis supervision is arranged individually by the student supervisors. Due to the rapid development of digital platforms for learning and collaboration and the wide internet penetration throughout Indonesia, the UT Graduate School initiated the development of online student supervision. The urgency of developing online thesis student supervision at UT stems from the need to monitor student supervision across Indonesia, especially because many supervisors are lecturers from partner universities. The platform will use Moodle because students are accustomed to this LMS in their study at UT. It is expected that the supervision platform can speed up the process of writing a thesis while still accommodating the different schedules of the supervisory team. Implementing online thesis supervision is essential to enhance the quality of the thesis. However, it is necessary to study the literature to investigate the efficacy, challenges, and best practices of online thesis supervision implemented by other institutions. This paper will also focus on the impact of online platforms on supervisor-student interactions and the challenges students face in using online thesis supervision practices.

Keywords: online learning; thesis supervision; digital platforms

Accepted: 20 June 2024 Approved: 10 July 2024 Published: 30 July 2024

INTRODUCTION

In the past few decades, the advancement of digital technologies has had a huge impact on higher education. The rapid development of digital technology has encouraged many universities to implement online learning or blended learning. The shift from conventional to online learning in Indonesia has been driven by several factors, including the globalization of education, the widespread availability of high-speed internet, and the growing demand for flexible learning options (Nasution et al., 2018; Priyanto &

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Ramadhan, 2019; Widiantoro, Roesminingsih, & Hartono, 2019; Giri, 2022). There are learning platforms that can be used to conduct online learning and meetings or to develop learning management systems for educational purposes, such as Google Meet, Zoom, Microsoft Teams, Moodle, Edmodo, etc. Various ways, such as using emails, chatting platforms, doing virtual meetings, or sharing documents in cloud storage, have also been reported by students and supervisors to conduct thesis guidance.

The use of online guidance systems has been widely reported in many universities (Yan, et al., 2012; Bengtsen & Jensen, 2015; Kimani, 2014; Al-Shahrani & Mohamad, 2018; Barclay et al., 2018; Alghamdi, 2019; Gumbo, 2019**;** Shakerian, et al., 2020; Nash, 2021). For example, Shakerian et al. (2020) reported the use of a Moodle-based LMS to conduct a thesis guidance process for students at the School of Management and Medical Education at Shahid Beheshti University, Iran. Likewise, several studies also reported the use of online thesis supervision system in Indonesian universities. Nasution, et al. (2018) described that a thesis supervision management information system is needed because both lecturers and students are having difficulties in scheduling face-to-face guidance. In addition, Widiantoro, Roesminingsih, & Hartono (2019) revealed that students' obstacles to thesis guidance in their studies are caused by the difficulty of managing guidance time due to students' busy work and difficulty in meeting supervisors because they must adjust the guidance time and student activities. Moreover, according to Priyanto & Ramadhan (2019), students and supervisors at Yogyakarta State University feel the convenience of using a final project supervision management system in their thesis guidance process. Students only need to upload documents to this system without having to meet their supervisors in person, although the effectiveness of this system is highly dependent on the willingness of supervisors and students to utilize this system.

When the COVID-19 pandemic happened in 2020-2021, inevitably universities around the world must implement online learning so that the learning process could continue. All universities in Indonesia were then forced to implement online learning, including applying online thesis guidance or supervision. Many colleges and universities started to put the online tutoring process into practice by using email and other communication tools to facilitate remote interaction between lecturers or tutors and students. Fortunately, internet infrastructure in Indonesia has been improving and many sophisticated web-based platforms are available and ready to use. These factors encouraged many universities to develop online learning and thesis supervision systems during the pandemic.

Unlike most universities in Indonesia which only started to fully rely on online instructions during the pandemic, the graduate program at the Open University (UT) has been offering online master's programs since 2013. Learning activities are carried out in a blended manner, which is a combination of online tutorials (asynchronous) and face-to-face tutorials (synchronous). Initially, the thesis supervision process was carried out by a combination of email and short messages service (SMS) using mobile phones. The implementation of online education at the graduate school of UT has improved since the integration of e-learning using Moodle and tutorial webinars using Microsoft Teams (Ms. Teams). Ms. Teams is used vastly not only by instructors and tutors for synchronous meetings with students and seminars but also frequently for thesis supervision. Supervision can also be combined with face-to-face meeting if the residence of the student and the supervisor are close to each other or in the same region. During the COVID-19

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pandemic, UT then changed all face-to-face tutorial meetings to virtual meetings using Ms. Teams, so that the learning process is conducted asynchronously using Moodle and synchronously utilizing Ms. Teams. Likewise, throughout the pandemic, the entire process of thesis supervision and proposal seminars, seminars on research results, and thesis exams was carried out online using Ms. Teams.

After the pandemic ended, seminar activities and thesis exams began to be carried out in a blended manner, where students were present at the regional office and the examiner team could be present physically or virtually. Moreover, because of the experience of participating in online learning during the pandemic, the UT Graduate School is increasingly accepting new magister students after the pandemic ends. Based on the very large number of master's students, UT also recruits supervisors from leading universities in Indonesia who are lecturers from partner universities holding a doctoral degree in relevant disciplines. Due to the scattered residence of both students and supervisors throughout Indonesia it is not easy to monitor the thesis supervision process and the obstacles experienced. Likewise, UT must provide various support for students to comply with the government regulations to take the master's curriculum for four semesters. Based on the results of the evaluation of the thesis guidance process, study programs and graduate schools need a platform where the guidance activities carried out can be monitored systematically.

The graduate school is currently building an online thesis supervision system, which will be equipped with a dashboard to monitor the implementation of the supervision and the completion of student thesis. The need for a dashboard is intended to monitor whether all supervision is carried out without problems. The dashboard is designed to help identify if a delay in the thesis completion occurs. The programs of study need a monitoring tool to notify them if some students do not respond in time to their supervisors or if any supervisor does not give timely feedback. This online thesis supervision system will increasingly become the main supervision system for the master programs, whereas other existing supervision methods, such as email, WhatsApp groups, and face-to-face meetings will eventually be the supporting tools for the online supervision system.

Based on the importance of the online thesis supervision system for UT, it is pertinent to study literature to investigate the challenges and best practices of online thesis supervision implemented by other institutions. This paper will also focus on the impact of online platforms on supervisor-student interactions and challenges experienced in using online thesis supervision application.

METHOD

The search for relevant articles starts by determining search criteria related to online thesis supervision. Two databases are used to search for relevant articles, namely (1) Taylor & Francis and (2) ScienceDirect. At first, the database used was ProQuest with the keyword ‘online thesis supervision’ and search criteria full-text, peer-reviewed, scholarly journals, and last 5 years. However, only three articles were identified and only two were found relevant to the focus of the study. Then, a search was conducted on the Taylor & Frances database with the keyword ‘online thesis supervision’, using the criteria of searching articles year 2019-2024 (the last five years), research articles, English, and open access, full-text. Out of the 1,373 articles identified, only a few articles are relevant to the online

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thesis guidance process. Through the database of ScienceDirect, 492 articles were obtained using the keyword 'online master thesis supervision'. The criteria consisted of the search year of 2019-2024, full-text journals, and research articles. However, there are not many research articles identified that discuss online thesis supervision. Unfortunately, if the keywords were changed to be more specific, there is no article found.

RESULT AND DISCUSSION

During the COVID pandemic occurred, several universities have utilized a thesis guidance communication system to alternate the face-to-face supervision process and developed a technology-based thesis supervision system (Djatmika, Prihandoko, & Nurkamto, 2021; Suparman, 2021; Nurmanto, Djatmiko, & Prihandoko, 2022; Giri, 2022; Lumbantobing, 2023). After the pandemic period, the online supervision process has become an alternative for supervisors who have a very high work schedule (Widiantoro, 2019), for example because in addition to being a lecturer, they also concurrently hold management positions, conduct research or community service activities, or participate in other activities. Online thesis supervision has been recognized as a viable synchronous alternative to the supervision process, as it can offer a few benefits, such as increased accessibility for students from diverse geographical locations and increased flexibility in scheduling supervision meetings.

A few articles which were identified from the search process reported the development of online thesis supervision applications. For example, Yan, Han, Yang, & Zhou (2012) reported the development of a web-based systems that mainly focus on monitoring the master thesis management process, not on the development of the research itself. The design of the web-based application incorporated instructional systems commonly used by supervisors, which was combining problem-based learning with collaborative learning approaches to improve the interaction between student and supervisors. Students considered the system prototype to be easy to use and more effective to support the thesis research process. The designing process involved six principles, such as (a) supporting the whole thesis research process, (b) offering group learning environment which enable teacher collaborative instruction, (c) facilitating knowledge building rather than just providing a discussion forum, (d) providing tools for communication and collaboration, (e) designing tools for process analysis and awareness, and (f) providing flexibility and modularity. A test with nine student users was designed to evaluate the software prototype of the new system. The result showed that students regarded the web version of the thesis as more effective in supporting the whole thesis research process and easy to use. The similarity with the design of the thesis supervision system that UT is building is in the system support for the thesis writing process, but UT complements it with the provision of a thesis completion monitoring system.

Another development of online thesis supervision system was reported by Shakerian, et al. in 2020. These authors described the development, implementation, and assessment of a Moodle-based learning management system (LMS) for master thesis supervision at the School of Management and Medical Education at Shahid Beheshti University, Iran. At the beginning of the development process, pairs of students and supervisor were enrolled in the Moodle-based thesis supervision course. The LMS provides features for managing the communication and interaction between students and supervisors, including

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giving feedback on the student's thesis. It was perceived that the LMS significantly improved the quality of the feedback and increased the thesis completion rate. The course of thesis supervision was equipped with varied activities such as forums, messages, online classes, chat, and the like, which allow for structured interaction between students and their supervisors. This way, course content can be accessed easily via the Moodle mobile application so that students can interact with the course anytime and anywhere. This model is very similar to the Moodle-based online thesis supervision at UT, which already in the final development stage and ready for small-scale testing with select students and supervisors.

In another study Giri (2022) explained the process of developing a web-based application for thesis supervision at the Informatics Engineering Study Program, Udayana University. The development of this application uses a waterfall model that visually depicts the work flowing from step to step of development like a series of waterfalls. The waterfall model begins with problem definition by identifying the problem, determining its cause, and drawing a strategy for solving it. Then the model continues by analyzing what should be done to solve the problem. The objective of the design phase is to determine how the problem will be solved. The system reported by Giri was still undergoing the development phase when the article was published. We have yet to learn about the results of the system implementation and how the students and supervisors perceived the effectiveness of system.

Although online thesis supervision is not new in some higher education institutions, many universities have started implementing the online thesis supervision system since the outbreak of COVID-19. A shift from conventional face-to-face thesis guidance to online thesis supervision might lead to contradictory opinions both on the side of the students and the supervisors. Among the challenges faced by the supervisors in using online thesis supervision during the COVID-19 pandemic were the adjustments they needed due to shifting from offline to online supervision (Djatmika et al., 2021; Nurmanto et al., 2022). Furthermore, according to Nurmanto et al., supervisors often didn't have the time to log in to the online media for the guidance process. The supervisors also felt that their interaction with students using media was ineffective and somehow suspected of decreased motivation. Moreover, the process of supervision sometimes got hindered by internet connection. Therefore, because the interaction between students and their supervisions is essential to improve the quality of student thesis writing (Djatmika et al., 2022), universities must equip students and supervisors with technological competencies and facilities so that the thesis supervision process can be conducted effectively in online learning (Barclay et al., 2008).

The main task of a supervisor is to direct and provide feedback (Kimani, 2014; Ali et al., 2016) so that students can produce a quality thesis. According to Sambrook et al. (2008), the key factor for a successful mentoring process at the doctoral level is the establishment of a good relationship between the supervisor and the student. Students' satisfaction in using the thesis guidance service is strongly influenced by the quality of communication, support, availability, and ability of the supervisor (Lumbantobing, 2023). The provision of support from the supervisors and university is likely to help students complete their thesis better and faster. Therefore, universities must ensure adequate support to assist students in completing their thesis (Lumbantobing, 2023).

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In addition, one of the most critical things in the thesis guidance process is the commitment and availability of time from the supervisor, the capacity to provide feedback, and experience in providing guidance (Kimani, 2014). The feelings of isolation and lack of communication with their friends, supervisors, and the university can become major challenges for online students (Kumar et al., 2021). Moreover, students need to set aside time to undergo the thesis supervision process and follow up on the supervisor's feedback. One of the complaints of master's program students who cannot meet the time to complete the thesis is their busy work (Widiantoro et al., 2019). Thus, aside from the supervisor's prompt constructive feedback, they need to be able to guide students to manage their time effectively. To ensure that the Graduate School can monitor the progress of thesis guidance the school must establish a supervision monitoring application.

Although online thesis supervision can help reduce any feelings of isolation of the students who cannot consult with their supervisors face-to-face, communicating through the media is not easy (Bengtsen & Jensen, 2015; Kumar et al., 2021). In a face-to-face meeting, the disapproval from the supervisor can be accepted by the student because the supervisor uses a tone and expression that can soften the correction message. However, if the same words are conveyed in writing via email or comments using track changes in the thesis report, students may regard them as a harsh reprimand. If this happens, students may feel demotivated to have any communication with the supervisors and may even withdraw from their studies. Thus, when giving feedback online supervisors must use proper netiquette (Bengtsen & Jensen, 2015). Contradictory findings were reported by Suparman (2021). In his study, students who conducted online/ICT-based thesis supervision illustrated that the supervisor's suggestions in colorful annotations on paper indicating errors that needed to be corrected were easy to understand. Those specified comments are considered more straightforward than corrections or recommendations explained by supervisors in conventional mentoring.

Based on the technical obstacles reported by previous researchers related to the implementation of online thesis guidance, UT has prepared guidelines for using the online thesis guidance system both for supervisors and students and will provide training before the system is fully implemented.

CONCLUSION

The online thesis supervision designed by UT seems to be similar to the Moodle-based system reported by Shakerian et al. in 2020. However, aside from designing a Moodle-based thesis supervision course UT also develops a monitoring dashboard to ensure the master thesis completion comply with the government regulations. Furthermore, both supervisors and students will be provided with guidelines for using the system and netiquette guidelines for communication between supervisors and students as well as a series of training before the official implementation of the system. The monitoring dashboard is designed for the management at the Graduate School, programs of study, and regional offices at different user levels.

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