EMPIRICAL STUDY ON LECTURER LEADERSHIP PRACTICES IN ONLINE LEARNING OF VOCATIONAL AVIATION COLLEGE

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Abstract
The aim of this study is to investigate the leadership exhibited by lecturers in the realm of online learning during COVID-19 pandemic. This research uses a mixed methodology. Both data collection and analysis were conducted to comprehensively address the research objectives. Primary data was gathered through the dissemination of questionnaires among selected cadets who served as respondents. Additionally, in-depth interviews were conducted with representatives from randomly chosen study programs. The acquired data were subsequently subjected to analysis employing simple statistical equations and a descriptive formula to calculate percentages. To augment the quantitative research findings, a triangulation process was implemented, integrating interview data with the concepts of lecturer leadership, which constituted the study's theoretical framework. The results of the study revealed that lecturers employed three key criteria, namely conceptual skills, human skills, and technical skills, in their leadership practices during the period of online learning amid COVID-19. The questionnaire results demonstrated that lecturers effectively employed various tactics within these three criteria to influence others, underscoring the inseparable connection between leadership and the lecturer's role. The research concludes that the leadership style exhibited by lecturers, as evidenced by these three criteria of skills and tactics, serves as a valuable reference for lecturers at higher education institutions.

Keywords: influence, lecturer leadership, online learning, strategy
Introduction
The global impact of the COVID-19 pandemic has been widely acknowledged as a catastrophic disaster (Blankenberger & Williams, 2020), disrupting numerous aspects of society, including politics, economy, social dynamics, and education (El Masri & Sabzaliyea, 2020; Murphy, 2020). Educational institutions worldwide have compelled to suspend face-to-face instruction, necessitating the rapid transition to online teaching methods (Al-Sholi et al., 2021; Ouma, 2021; van der Spoel et al., 2020). However, amidst the challenges imposed by this crisis, the pandemic has also presented an opportunity for transformative change in the field of education, requiring adaptability from lecturers and educational institutions alike. Such adaptation entails the cultivation of lecturers' digital literacy and proficiency in technology integration (König et al., 2020; Ssemugenyi & Nuru Seje, 2021), as well as the commitment of lecturers, administrative staff, and students in embracing a paradigm shift in learning approaches. Moreover, higher education institutions must proactively prepare themselves in terms of budgetary considerations, student recruitment strategies, research initiatives, and effective implementation of virtual classroom environments (Al-Sholi et al., 2021; Blankenberger & Williams, 2020; El Masri & Sabzaliyea, 2020; van der Spoel et al., 2020). Consequently, the COVID-19 pandemic has necessitated a comprehensive and cohesive response from all stakeholders in the education sector, emphasizing the imperative of resilience and adaptability in the face of unprecedented challenges.

In addition, the preparedness of lecturers assumes paramount importance in the swift transition, development, and implementation of online teaching modalities during campus closures resulting from the COVID-19 pandemic. Lecturers are forced to embrace online instruction, notwithstanding their lack of prior experience in this domain (Cutri et al., 2020; Cutri & Mena, 2020). Consequently, they are compelled to familiarize themselves with platforms such as Zoom and rapidly acquire the necessary skills through participation in online learning webinars offered by their respective institutions or external sources (Agasisti & Soncin, 2021; Jung et al., 2021). Within online learning, in addition to digital preparedness, the indispensability of lecturer leadership emerges as a prominent factor influencing the learning process. This arises from the marked disparity between face-to-face instruction and learning in the pandemic context. In traditional offline settings, lecturers and students are physically co-located, enabling direct management of the teaching, and learning processes, particularly concerning established classroom norms and regulations (Silitonga, 2021). Conversely, in the realm of online learning, lecturers and students engage through digital platforms, physically distant from one another. Consequently, supervision of learning encounters limitations, as lecturers lack direct visual access to students and their activities behind the screens of their devices. This distinction underscores the pressing necessity for lecturer leadership, with a focus on the lecturers’ influence on students as learners.

Politeknik Penerbangan Indonesia Curug (PPIC) has also faced significant disruptions due to the outbreak of COVID-19. As the virus spread throughout Indonesia, educational institutions, including PPIC, swiftly transitioned to online learning as a means of continuing education (Diva et al., 2021; Kristina et al., 2020; Sadikin & Hamidah, 2020). This shift to online learning impacted all study programs at PPIC, including the Aviation Engineering program, where face-to-face instruction was replaced entirely with virtual alternatives. The introduction of online learning presented both students and lecturers with a new and unfamiliar educational landscape. Lecturers had to adapt their teaching styles and leadership approaches to ensure that virtual classrooms remained conducive to learning and achieved the desired educational objectives.

According to Thoha, as cited by Enoh (2016), and supported by the viewpoints of several experts referenced by Suwandanan et al. (2015), and Nurlaela & Sugiyanto (2019), it is evident that lecturer leadership styles have the
potential to influence students as learners, not only in terms of their grasp of subject matter but also in shaping their attitudes and behaviours (Weismann, 2013). Additionally, lecturer leadership has been found to enhance the overall learning experiences and outcomes of students (Cao, 2022). Leadership, as defined by Manuel Delgado Bardales et al. (2021), Silistiong (2021), Prastiawan et al. (2020), Septiania (2019), Muhammad (2017), and Bello (2015), is a process that entails exerting influence on others to perform tasks with a heightened sense of purpose in order to achieve specific goals. Conversely, Weismann (2013) and Asma (2017) posit that lecturer leadership in the context of education is primarily oriented towards enhancing the quality of learning over time (Andy-Wali & Wali, 2018), mobilizing students to achieve their maximum potential (DeDeyn, 2021; Listiningrum et al., 2020), and cultivating intrinsic motivation for learning among students (Trigueros et al., 2020). Furthermore, Mulyono, as referenced in Prastiawan et al. (2020), categorizes leadership skills into three types: conceptual skills, people skills, and technical skills.

The investigation of lecturer leadership intricately linked to its parent concept, teacher leadership. Although research connecting teacher leadership to universities has not fully addressed lecturer leadership, it has highlighted universities as conducive environments for cultivating leadership within the classroom (Berry & Hess, 2013; Grant, 2006; Sales et al., 2017; Snoek et al., 2015; Whitney, 2013). Additionally, Pounder (2006) conducted research elucidating the distinction between lecturer leadership and teacher leadership, emphasizing research tasks exclusive to lecturers. Notable studies focusing explicitly on lecturer leadership encompass analyses of lecturers' political skills (Salisu & Awang, 2019), gratitude (Garg, 2020), as well as gratitude and social intelligence (Garg & Gera, 2020). Berestova, Gayfullina, & Tikhomirov (2020) have contributed to the field with a study highlighting the diversity and significance of knowledge pertaining to lecturer leadership within university settings. The development of lecturer leadership research extends to other domains, exploring its influence on various aspects of students' experiences (Andy-Wali & Wali, 2018; Bardales et al., 2021; DeDeyn, 2021; Dewiyani, 2017; Enoh, 2016; Husna, 2015; Kang & Zhu, 2022; Suhana et al., 2017; Sulistiyarini, 2015; Tarmizi, 2016; Trigueros et al., 2020; Weismann, 2013), resource allocation (Bin et al., 2021), and educational processes (Martínez et al., 2021). Furthermore, research has also explored the factors that influence lecturer leadership (Zhang et al., 2021).

The analysis of prior research reveals that studies on lecturer leadership have garnered increasing attention since 2019. Intriguingly, this period coincided with the onset of the COVID-19 outbreak. The cited studies have delved into various facets of lecturer leadership, encompassing the assessment of lecturers' comprehension of the concept of lecturer leadership within the classroom, the ramifications of leadership on students, the management of classroom resources, the learning process within the classroom, and the factors influencing lecturer leadership. However, these studies have yet to provide comprehensive insights into the implementation of lecturer leadership in the context of online learning during the COVID-19 pandemic.

Implementing online learning raises several concerns, including the insufficient digital competence among lecturers to manage online classes effectively. Moreover, the online learning environment is characterized by limited opportunities for supervision and interaction between lecturers and students. Another issue pertains to students exploiting the constrained screen space and the limited digital proficiency of lecturers to engage in unrelated activities during the learning process. It is important to note that this research is subject to certain limitations, namely its focus on the aviation engineering cluster study program and the examination of lecturer leadership within the context of online learning activities.

This research aims to investigate the phenomenon of lecturer leadership in the context of online learning during the COVID-
19 pandemic, building upon the identified problems and problem boundaries. The scholarly contribution of this study lies in its provision of academic insights into the concept of lecturer leadership within the specific context of online learning during a pandemic. By doing so, it adds to the existing body of knowledge concerning lecturer leadership, as well as the broader concept of teacher leadership. Moreover, this research holds practical value as it generates empirical evidence pertaining to lecturer leadership in the realm of online learning during a pandemic. The findings of this study can enhance lecturers' understanding of the concept of lecturer leadership and its practical application, benefiting both online and offline classroom settings.

Methods

The research design employed in this study utilizes a mixed methods approach, which involves the integration of both quantitative and qualitative methodologies. According to Morse and Niehaus (Bowen et al., 2017), the utilization of mixed methods enables researchers to incorporate diverse approaches, thereby facilitating the formulation of research questions within various contextual and parameter settings. Additionally, mixed methods research fosters interdisciplinary collaboration, as noted by Bernard (Dominguez & Hollstein, 2014). Furthermore, the inclusion of multiple methods enhances the robustness and credibility of the findings, offering more comprehensive evidence compared to relying solely on a single method (Albert et al., 2009; Bryman, 2003; Caruth, 2013; Creswell & Clark, 2018; Creswell & Creswell, 2018).

Moreover, the utilization of mixed research methods facilitates the integration of various levels of strategies across multiple phases. This structured approach enhances the systematic nature and planning of the research process (Creswell & Báez, 2021; Flick, 2004). Each phase can be further reinforced through triangulation, involving the use of quantitative or qualitative methods, depending on the specific objectives pursued—whether they entail generalizing patterns or enriching findings within their contextual settings (Bryman, 2003; Mason, 2006; Newby, 2014). Furthermore, the combination of both research methods contributes to increased validity (Bazeley & Jackson, 2013; Bowen et al., 2017) and the generation of novel knowledge (Stange et al., 2006).

This study aims to provide a comprehensive understanding of lecturer leadership in the Aviation Engineering study programs during the COVID-19 pandemic by employing a mixed research methodology. The research design incorporates a two-fold approach, commencing with a quantitative phase, followed by data triangulation through a qualitative phase. The data analysis process employs a mixed approach, encompassing quantitative analysis as a preliminary step, which is subsequently supplemented by qualitative analysis. This methodological integration ensures a holistic examination of the phenomenon under investigation, allowing for a more nuanced and in-depth exploration of lecturer leadership in the classroom amidst the challenges posed by the COVID-19 pandemic.

The research was carried out at the Aviation Engineering Study Program within Politeknik Penerbangan Indonesia Curug. The study population consisted of cadets enrolled in three distinct study programs, the Teknik Pesawat Udara (TPU), Teknik Navigasi Udara (TNU), Teknik Bangunan dan Landasan (TBL) specializations. The sample size consisted of 142 participants, with 22 individuals representing the TPU program, 72 individuals representing the TNU program, and 48 individuals representing the TBL program. The sample composition reflects a diverse representation of cadets across the various study programs, ensuring a comprehensive and representative perspective for the research investigation.

The primary data for this research was collected through the distribution of questionnaires to the selected respondents, consisting of 142 cadets. The questionnaires were administered in an online format using Google Forms, encompassing inquiries pertaining to lecturer leadership based on the conceptual framework proposed by Mulyono.
Previous studies. By triangulating the quantitative and qualitative data, the study aimed to strengthen the validity and reliability of the research findings, ensuring a more robust and comprehensive understanding of lecturer leadership in the context of online learning during the COVID-19 pandemic.

Results and Discussions

The findings from the questionnaire were categorized into three distinct criteria of lecturer leadership skills, as conceptualized by Mulyono (Prastiawan et al., 2020). These criteria include conceptual skills, people skills, and technical skills. Each criterion consisted of a specific number of items, with eight, seven, and five questions, respectively. The first criterion, which pertains to conceptual skills, encompassed eight questions, specifically questions 2, 5-6, 11-14, and 20. The second criterion, focusing on people skills, consisted of seven questions, namely questions 1, 4, and 15-19. The third criterion comprised five questions, including questions 3 and 7-10. The results obtained from all criteria are notated in the Table 1 accordingly. By organizing and presenting the questionnaire results in this manner, a comprehensive overview of the responses obtained for each criterion of lecturer leadership skills is provided.

Table 1 presents the responses obtained from the questionnaire, providing insights into the perceptions of the respondents regarding the criteria of conceptual skills in lecturer leadership during online learning. The majority of respondents indicated agreement with the activities carried out by lecturers in relation to these skills. Notably, all respondents expressed agreement with the lecturer's ability to explain the learning programme unit effectively, as indicated by the unanimous agreement for the second question. The remaining questions representing the criteria of conceptual skills focused on factors such as the utilization of varied learning methods, teaching proficiency, clarity of explanations, mastery of teaching materials, responsiveness to student inquiries, sequential presentation of the material, and adherence to the class schedule. Based on the
questionnaire results, it can be inferred that, according to the students, lecturers have demonstrated proficiency in one of the essential skills associated with effective lecturer leadership, namely conceptual skills.

<table>
<thead>
<tr>
<th>Question No.</th>
<th>Absolutely Agree (%)</th>
<th>Agree (%)</th>
<th>Disagree (%)</th>
<th>Absolutely Disagree (%)</th>
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<td>42.6</td>
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<tr>
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<td>46.1</td>
<td>0.7</td>
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<tr>
<td>20</td>
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<td>41.8</td>
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</tbody>
</table>

The activities that exemplify the conceptual skills criteria discussed above align with the concept of leadership as the ability to influence others towards achieving common goals, as proposed by Weismann (2013) and Silitonga (2021). These authors present various tactics that can be employed in influencing others. One such tactic is the use of legitimacy tactics, which is evident in the delivery of the learning program unit (LPU) at the beginning of the lecture. Through the LPU explanation, lecturers are expected to demonstrate their ability to clarify their role as class supervisors. This involves explaining their authority as lecturers and conveying the rights and responsibilities of students as members of the class they oversee. Furthermore, the LPU also includes assignments that allow lecturers to assess students' performance and determine their success in the conducted learning activities. On the other hand, the remaining seven questions illustrate the use of rational persuasion tactics. This tactic entails the lecturer effectively explaining the learning material, including the concepts and theories within it.

During the interviews, the informants corroborated the explanation of the LPU provided by the lecturers at the beginning of the class. One informant, informant P, expressed that the LPU is structured similar to a schedule, with the lecturer informing the students about the upcoming topics to be covered. Additionally, the informant mentioned that the lecturer would often review the previously covered lessons before commencing with the new material. Another informant, informant A, shared a similar perspective, stating that the lecturer would...
inform the students about the upcoming material for the following week, including any presentations, quizzes, or readings that might be assigned. This information was shared in advance to allow students ample time for preparation. These testimonies from the informants further validate the practice of providing LPU explanations as part of the lecturer’s conceptual skills in implementing lecturer leadership.

The results pertaining to the second criterion, which focuses on people skills, also provide intriguing data similar to the previous criteria. Lecturer leadership necessitates possessing people skills (Omar, Zulazmi, & Ladin, 2019). The questionnaire encompassed questions regarding the lecturer’s ability to motivate students, use clear language, dress neatly during teaching sessions, activate the video camera during online classes, exhibit charisma, be punctual, and give attention to students. Among the seven questions posed to the cadets, two activities received unanimous agreement from the respondents. These activities were related to the lecturer’s practice of dressing neatly and consistently activating the video camera during teaching sessions. These findings highlight the significance of certain aspects of people skills in the context of lecturer leadership. Dressing neatly conveys professionalism and fosters a conducive learning environment, while activating the video camera facilitates visual engagement and enhances students’ connection with the lecturer.

Within the second criterion of lecturer leadership, the utilization of specific tactics becomes evident, such as coalition and personalized request, in order to persuade students to actively engage in online lessons. By consistently activating the video feature during teaching sessions, lecturers employ the coalition tactic to encourage students to participate attentively, despite the remote learning format. Moreover, lecturers employ personalized request tactics by providing individual attention to students, fostering a sense of connection and personalized support. The charismatic nature of lecturers also contributes to their leadership effectiveness, as personal attraction tactics inspire learners to attentively listen to their words, observe their actions, and adopt their viewpoints. Additionally, employing clear language, punctuality, and maintaining professional attire when teaching is part of attractive personal tactics. These practices highlight the lecturer’s ability to lead by example and uphold teaching quality. Consequently, they cultivate a sense of affinity among learners, fostering admiration and motivation to emulate their behavior. Overall, these findings underscore the significance of employing various leadership tactics to enhance lecturer-student interactions and foster a conducive learning environment in online settings.

In relation to the second skill of lecturer leadership, the ability to motivate students was emphasized by the informants during interviews. Informant E emphasizes the lecturer’s consistent efforts to motivate students by encouraging them to engage in positive actions, both during and outside of online lessons. The lecturer emphasizes the importance of helping parents and undertaking meaningful activities during free time. Informant D further reinforces the lecturer’s motivational approach, highlighting the lecturer’s consistent provision of motivation during lessons. The informant recalls the lecturer’s empowering messages, particularly emphasizing the significance of women’s independence and the pursuit of high ideals through education. Additionally, informant D emphasizes the lecturer’s guidance on the importance of exploring various domains, including entrepreneurship, beyond campus and educational activities. The lecturer encourages students to develop entrepreneurial skills, starting with small-scale ventures such as credit sales and gradually expanding into larger enterprises. Informant A echoes this sentiment, underscoring the lecturer’s emphasis on entrepreneurship as a valuable avenue for personal and professional growth. The lecturer’s motivation extends to encouraging students to embrace diverse business opportunities, from selling goods to exploring entrepreneurial endeavors during their free time. These insights highlight the lecturer’s proactive efforts to motivate and guide students towards personal growth and success, encompassing both academic and non-academic domains.
In the technical skills criteria, respondents were asked about various aspects related to lecturer leadership, including the use of presentation media, opportunities to ask questions, group discussions, enhancement of soft skills through group assignment presentations, and case study assignments. The findings indicate that although there was not a unanimous agreement among respondents as seen in criteria one and two, most respondents agreed that lecturers demonstrated lecturer leadership in terms of technical teaching skills. The data suggests that lecturers effectively utilized presentation media, provided opportunities for students to ask questions, facilitated group discussions, fostered the development of soft skills through group assignment presentations, and assigned case studies to enhance students' understanding and analytical abilities. These findings highlight the lecturer's proficiency in utilizing various instructional methods and strategies to enhance the learning experience and promote student engagement. The results further indicate that lecturers possess the technical skills necessary for effective online teaching, which contributes to their overall leadership in the classroom during the COVID-19 pandemic.

The technical skills criteria exhibit several tactics that can be analyzed within the context of lecturer leadership. One such tactic is the use of attractive personal tactics, whereby lecturers effectively manage the class, deliver captivating presentations, and cultivate a pleasant classroom atmosphere. Additionally, the delegation tactic is employed, wherein lecturers actively involve students in the learning process and provide ample opportunities for them to express their opinions during teaching and learning activities. This can be observed in questions related to enhancing soft skills through group assignments, case study assignments, providing opportunities for asking questions, and facilitating group discussions. Furthermore, questions 7-10 not only align with the delegation tactic but also reflect the application of heartfelt tactics. This tactic entails lecturers expressing genuine appreciation for students who demonstrate high levels of engagement and attentiveness in their learning. These combined tactics contribute to an effective and engaging online learning environment, highlighting the lecturer's proficiency in technical teaching skills and their ability to foster a positive and interactive learning experience for students.

The informants corroborate the effectiveness of the lecturer's teaching approach in reinforcing technical skills. According to informant D, the lecturer incorporates material explanations, quizzes, and discussions, with a point-based system to enhance student engagement and motivation. Informant E further highlights the lecturer's utilization of case studies during free time, fostering active participation and passion in class discussions. Additionally, the question-and-answer forum encourages students to actively engage with the subject matter. Completing assignments based on the case studies further strengthens students' technical skills, allowing them to apply the knowledge acquired. These insights collectively demonstrate the positive impact of the lecturer's interactive teaching methods in cultivating technical skills, promoting active learning, and creating an enthusiastic classroom environment.

The lecturer leadership exhibited in online learning by cadets of the Aviation Engineering study program encompasses three essential skills: conceptual skills, people skills, and technical skills, as outlined by Mulyono in (Prastiawan et al., 2020). These skills align with the broader concept of leadership, which involves influencing others to achieve shared objectives, as expounded upon. To effectively influence others in the online learning context during the pandemic, lecturers employ various tactics, including legitimacy tactics, coalitions, good personalities, attractive personalities, delegation, and heartfelt approaches. These tactics enable lecturers to establish their authority, foster student motivation, maintain a positive classroom atmosphere, encourage active student participation, and provide opportunities for collaborative learning. The integration of these leadership skills and
tactics enhances the overall learning experience in the online environment.

Conclusion
During the COVID-19 pandemic, lecturer leadership in online learning within Aviation Engineering study programs encompassed three fundamental criteria: conceptual skills, people skills, and technical skills. The research findings indicate that lecturers effectively employed various tactics as part of their influential role. These tactics included legitimacy, coalition-building, exemplifying good personal traits, exuding charisma, practicing delegation, and appealing to students on an emotional level. By leveraging these tactics, lecturers successfully influenced and motivated students to engage in online learning actively. The concept of lecturer leadership, encompassing the three criteria of skills and the tactics employed to influence others, holds valuable implications for lecturers at Politeknik Penerbangan Indonesia Curug and other universities. Mastery of these three criteria, along with the corresponding tactics, is crucial for lecturers to effectively lead their classes, whether in online or offline settings, albeit with necessary adjustments.

References


Dan Kepemimpinan Dosen Terhadap Hasil Belajar Logika Matematika Mahasiswa Program Studi Pendidikan … In Jurnal Pendidikan Informatika dan Sains. journal.ikippgriptk.ac.id/index.php/saintek/article/download/68/66


