

Readiness for Blended Learning in Pancasila Education: Evidence from Students and Lecturers at Universitas Bina Sarana Informatika

Yessica Mega Aprita

Universitas Bina Sarana Informatika

Corresponding email: yessica.ycm@bsi.ac.id

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ABSTRACT

This study aimed to describe the readiness of students and lecturers to implement blended learning in the Pancasila Education course at Universitas Bina Sarana Informatika (UBSI). A descriptive quantitative survey involved 130 students and 7 lecturers purposively selected from a single institution. Data were collected through online questionnaires comprising 21 student items and 15 lecturer items. Item validity was assessed using the Pearson product-moment correlation, with all items meeting the validity criteria. Correlation coefficients ranged from 0.665 to 0.811 for the student instrument and from 0.773 to 0.981 for the lecturer instrument. Cronbach's alpha coefficients indicated very high internal consistency, with values of 0.96 and 0.97 for the student and lecturer instruments, respectively. Student readiness was assessed in terms of digital competence, technology access, and learning motivation, while lecturer readiness was assessed in terms of digital competence, online assessment readiness, and teaching readiness. Data were analyzed using descriptive statistics in R based on means, standard deviations, and readiness categories on a five-point Likert scale. Students were classified as Prepared in digital competence ($M = 3.65$) and learning motivation ($M = 3.68$), while technology access was Moderately Prepared ($M = 2.88$; $SD = 1.45$). Among lecturers, digital competence was Highly Prepared ($M = 4.57$; $SD = 0.53$), while teaching readiness ($M = 4.00$; $SD = 0.82$) and online assessment readiness ($M = 3.57$; $SD = 1.06$) were Prepared. The findings indicate variation across readiness dimensions, particularly in student technology access and lecturer online assessment readiness. Given the small lecturer sample and single-institution context, the findings represent a descriptive profile and should not be generalized to higher education in Indonesia.

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Introduction

Advancements in digital technology have driven a transformation in higher education, particularly regarding the design and delivery of instruction. Blended learning is

an approach that integrates face-to-face instruction with online learning within a structured instructional design. This approach offers flexibility in higher education delivery while maintaining face-to-face interaction between lecturers and students. Through a systematic review, Müller and Mildenerger (2021) present evidence that blended learning facilitates the shift of some face-to-face instruction to online environments without resulting in significant differences in learning outcomes.

The evolution of blended learning demonstrates that its implementation entails more than just the use of technology; it requires a combination of instructional design, learning activities, learning resources, assessment, and feedback. McCarthy and Palmer (2023) propose recontextualizing the implementation of blended learning in higher education at the institutional level, arguing that alternative conceptualizations focusing solely on technology or platform training are inadequate. Istenič (2024) further notes that blended learning combines face-to-face and distance learning, allowing for development tailored to specific learning goals and needs. Implementation experiences in higher education highlight the importance of facilities, instructional planning, content development, and monitoring and evaluation (Wagiran et al., 2019). The COVID-19 pandemic accelerated technology adoption in higher education, while research on blended learning continues to expand, covering pedagogical, technological, student, instructor, and institutional aspects (Ashraf et al., 2021). These conditions indicate that the sustainability of blended learning requires consideration of the readiness of all parties involved in the learning process.

In this study, readiness is conceptualized as a multidimensional condition reflecting an individual's capacity and disposition to engage in or facilitate learning that integrates face-to-face and online delivery methods. This framework serves as the core reference for organizing the dimensions of readiness, without implying that all these dimensions can be derived from a single instrument or assessment model. For students, capacity is manifested in digital competence, supporting conditions in technological access, and willingness in learning motivation. For staff, digital competence reflects the capacity to use technology, while readiness to teach and conduct assessments online represents the ability to translate that capacity into teaching and assessment functions. Thus, these six dimensions are conceptualized as interconnected aspects of readiness, yet they are operationalized with due regard for the respective role demands of students and lecturers.

For students, readiness is crucial, as they must be able to engage in learning that combines face-to-face and online activities. Adams et al. (2021) state that students' readiness to transition to technology-based learning varies, and the use of technology in daily life does not automatically render them prepared for academic requirements. Readiness also encompasses the ability to direct one's own learning process. Yavuzalp and Bahcivan (2021) reveal that undergraduate students' readiness for e-learning is linked to self-regulated learning skills, learning satisfaction, and academic achievement. Furthermore, student participation in blended learning spans academic, behavioral, cognitive, and affective domains (De Bruijn-Smolders & Prinsen, 2024). Wagiran et al. (2022) found that student

readiness is also associated with technological literacy, device proficiency, user satisfaction, and motivation. Findings by Shakeel et al. (2023) further reinforce the view that student readiness is a multidimensional construct that can be systematically assessed.

Based on this review, student readiness in the present study is delineated into three dimensions: digital competence, technological access, and learning motivation. Digital competence refers to students' ability to use devices, applications, and digital media to engage in academic activities. Technological access refers to the availability of devices, connectivity, and other technological resources that enable students to participate in blended learning. Learning motivation is defined as the students' willingness to participate in and sustain engagement with learning. The selection of the digital competence dimension is also supported by Cabero-Almenara et al. (2022), who view digital competence as a key skill for students in utilizing technology for academic purposes. Thus, these three dimensions reflect what students are capable of doing, the conditions enabling them to do so, and the willingness or motivation driving them to fulfill their roles as learners.

From the perspective of lecturers, readiness requirements differ because they play a role in planning, implementing, facilitating, and assessing learning. Vishnu et al. (2022) highlight the key role lecturers play in ensuring technology is used to support pedagogical processes. Lecturer digital competence encompasses more than just the ability to use devices; it also includes the ability to integrate technology into instructional practices. Saltos-Rivas et al. (2023) reveal that lecturer digital competence is a multidimensional domain shaped by both individual and contextual factors. Technical skills in using platforms do not always reflect readiness regarding strategy or learning objectives, as reported by Junus et al. (2021). Furthermore, Gültekin and Medeb (2023) indicate that instructor readiness for blended learning involves the ability to combine online and face-to-face instruction, while Çemçem et al. (2024) identify assessment as a crucial factor in instructor readiness.

Based on this review, lecturer readiness in this study is operationalized through three dimensions: digital competence, readiness to conduct online assessment, and teaching readiness. Digital competence refers to a lecturer's ability to utilize digital technology to support their teaching. Readiness for electronic assessment (online assessment) refers to the preparedness to design, implement, evaluate, and provide feedback within an electronic environment. Teaching readiness is defined as the preparedness to plan and design teaching and learning activities that integrate face-to-face interaction with online engagement. These three dimensions reflect technological capacity and how that capacity can be applied to teaching and assessment functions.

Readiness becomes increasingly crucial when blended learning is implemented in the Pancasila Education course. This course aims not only for knowledge mastery but also encompasses the internalization of Pancasila values and an understanding of their application in social, national, and state life (Chairiyani et al., 2023). However, the nature of value-based learning requires space for interaction, discussion, and reflection, as well as opportunities to

connect values with real-life experiences and interpret social issues. Therefore, rather than simply transferring material to an online environment, the implementation of blended learning for Pancasila Education needs to be re-examined. Online activities should facilitate access to learning resources and support reflection, while face-to-face interactions can be leveraged to enhance dialogue and a sense of community. These characteristics make the readiness of students and lecturers a relevant topic for collective study within the context of Pancasila Education.

To provide an overview of developments in this field of study, this review employs bibliometric analysis using VOSviewer software on publications related to blended learning and Pancasila Education from 2017 to 2025. Bibliometric analysis can also be used to map topic evolution, keyword co-occurrence relationships, and the knowledge structure of a discipline (Donthu et al., 2021). In this study, bibliometric analysis serves as supporting information to gain insight into the research landscape, rather than acting as the sole basis for identifying research gaps. The search procedures, database sources, document criteria, keyword cleaning processes, and VOSviewer parameters are detailed in the methodology section to ensure the mapping procedure is traceable and replicable.

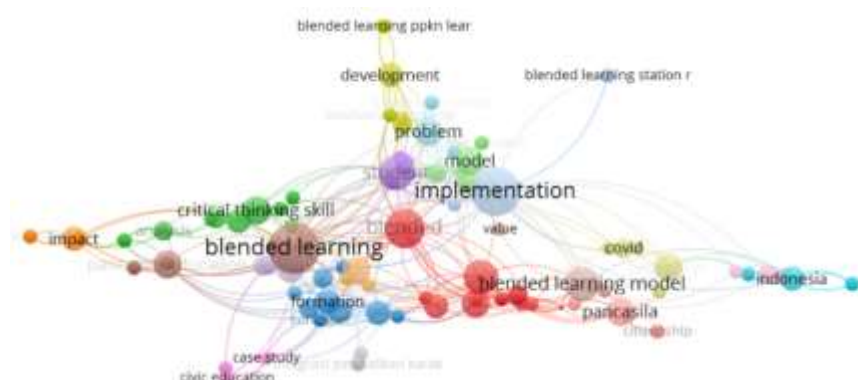


Figure 1. Bibliometric Visualization of Keywords Related to Blended Learning and Pancasila Education Using VOSviewer

Figure 1 displays the terms “blended learning,” “blended learning model,” and “implementation” as central nodes within the keyword network, whereas “Pancasila” appears toward the periphery while remaining connected to themes such as values, citizenship, Indonesia, and blended learning model. This mapping provides contextual evidence of the position of Pancasila-related themes within the broader blended learning research landscape. However, the position or frequency of individual keywords in the bibliometric network is not treated as sole evidence of a research gap. Instead, the research position is established through a synthesis of relevant prior studies and the identification of aspects that remain insufficiently examined.

A synthesis of the literature reveals that research on blended learning readiness tends to treat the perspectives of students and instructors separately. Studies focusing on students largely center on digital competence, self-regulation, motivation, and access to technology,

whereas studies concerning instructors emphasize digital competence, pedagogical skills, the integration of online and face-to-face instruction, and assessment. Several studies have also examined the implementation of blended learning in Pancasila Education (Setiaji & Dinata, 2020; Chairiyani et al., 2023). Yet, it remains unclear how the readiness profiles of students and lecturers take shape concurrently within the context of Pancasila Education when both are measured against their respective demands. Students face the challenge of accessing, participating in, and maintaining engagement with the learning process, while lecturers face the challenge of designing, facilitating, and assessing that learning. Consequently, mapping both groups within this shared context can offer a more comprehensive overview of which aspects of readiness are relatively strong and which require further attention.

Universitas Bina Sarana Informatika (UBSI) was selected as the research setting because the Pancasila Education course is part of the institution's curriculum, and its learning environment is conducive to the application of digital technology. Conducting research involving both students and lecturers within the same institution allows for the examination of both perspectives within a shared instructional and institutional context. However, given that this study employs a non-probability sample and focuses specifically on UBSI, the findings are intended to describe conditions within that specific context rather than to be generalized to all higher education institutions in Indonesia.

Based on the conceptual framework and research gap outlined above, this study aims to describe the readiness of students and lecturers to utilize blended learning in the Pancasila Education course at Universitas Bina Sarana Informatika (UBSI). Student readiness is examined in terms of digital competence, technology access, and learning motivation, while lecturer readiness is examined in terms of digital competence, online assessment readiness, and teaching readiness.

Specifically, this study addresses two research questions: (1) What is the level of student readiness in terms of digital competence, technology access, and learning motivation, and which dimension shows the lowest level of readiness? and (2) What is the level of lecturer readiness in terms of digital competence, online assessment readiness, and teaching readiness, and which dimension shows the lowest level of readiness?

This study makes an empirical and contextual contribution by providing a descriptive profile of student and lecturer readiness for blended learning in the context of Pancasila Education. The contribution lies in examining both groups simultaneously while using dimensions that reflect the demands of their respective roles.

Method

This study employed a quantitative descriptive research design using a survey method to obtain an empirical overview of student and lecturer readiness for implementing blended learning in the Pancasila Education course at Universitas Bina Sarana Informatika (UBSI). The study was non-experimental, as no intervention was administered to the participants;

instead, readiness was measured and described based on their responses to the research instruments. The study was conducted during the even semester of the 2025/2026 academic year at the UBSI Kramat 98 campus. Data were collected from June 7 to June 22, 2026. Readiness for blended learning implementation was examined from two perspectives, students and lecturers.

Populations and Sample

The study involved 2,347 students and 78 lecturers who taught Pancasila Education. The accessible population consisted of active students in the Management Study Program at UBSI Kramat 98 Campus who were enrolled in the Pancasila Education course. The sample was selected using purposive sampling based on the following criteria: (1) active Management Study Program students who were enrolled in the Pancasila Education course and had experienced at least eight sessions of blended learning, and (2) lecturers teaching Pancasila Education who implemented blended learning in their courses. Based on these criteria, 130 students and 7 lecturers participated in the study.

The research invitation and questionnaire link were distributed to prospective respondents through the lecturers teaching the respective classes. Purposive sampling was used because the study required respondents with direct experience of blended learning. Therefore, the sample was not intended to provide statistical representation of the population, and the findings were not generalized to the broader higher education population. The use of a non-probability sampling method may also introduce self-selection bias.

Variables and Aspects

The study examined readiness for implementing blended learning from the perspectives of students and lecturers. Readiness was defined as a multidimensional condition encompassing the capacity, supporting conditions, and willingness required to participate in or facilitate learning that integrates face-to-face and online activities.

For students, readiness was operationalized into three dimensions. Digital competence refers to students' ability to use digital devices, applications, and media to support academic activities. Technology access refers to the availability of devices, internet connectivity, and technological resources that enable students to participate in blended learning. Learning motivation refers to students' willingness and drive to participate in, engage with, and sustain their involvement in learning activities.

For lecturers, readiness was operationalized into three dimensions. Digital competence refers to lecturers' ability to use digital technologies to support the learning process. Online assessment readiness refers to lecturers' preparedness to design, implement, assess, and provide feedback through online assessment. Teaching readiness refers to lecturers' preparedness to plan, implement, and facilitate learning that integrates face-to-face and online activities.

Research Instrument

The instruments were developed based on a synthesis of literature on blended learning readiness, digital competence, technology access, learning motivation, and lecturer readiness for blended learning. The instruments were not directly adapted from a single existing scale but were developed contextually to reflect the characteristics of students and lecturers in the Pancasila Education course. The development of the student readiness dimensions was informed by research on blended learning readiness, particularly Shakeel et al. (2023), and the digital competence framework of Vuorikari et al. (2022). The lecturer readiness dimensions were informed by literature on instructor readiness for blended learning, particularly Çemçem et al. (2024). These sources provided the conceptual basis for determining the dimensions and indicators, while the item statements were formulated and contextualized for the present study.

The instruments did not undergo expert judgment. Therefore, their quality was evaluated empirically through item validity and internal reliability testing. Data were collected using two five-point Likert-scale questionnaires. The student instrument consisted of 21 items, with seven items for each dimension of digital competence, technology access, and learning motivation. The lecturer instrument consisted of 15 items, with five items for each dimension of digital competence, online assessment readiness, and teaching readiness. The distribution of items is presented in Table 1.

Table 1. Distribution of Research Instrument Items

Group	Dimension	Item Numbers	Favorable	Unfavorable	Total
Students	Digital competence	1–7	6	1	7
	Technology access	8–14	5	2	7
	Learning motivation	15–21	6	1	7
	Total	1–21	17	4	21
Lecturers	Digital competence	1–5	5	0	5
	Online assessment readiness	6–10	3	2	5
	Teaching readiness	11–15	4	1	5
	Total	1–15	12	3	15

The quality of the instruments was assessed empirically before the data were used for the main analysis. Item validity was examined using the Pearson product-moment correlation by correlating each item score with the total score. The analysis was conducted separately for the student and lecturer instruments, and item validity was determined based on the correlation coefficient and statistical significance. Internal consistency reliability was assessed using Cronbach's alpha to evaluate the consistency of items within each instrument. The validity and reliability results are presented in the Results section.

Data Collection Technique

Data were collected online using Google Forms from June 7 to June 22, 2026. The questionnaire link was distributed through the lecturers teaching the respective classes to respondents who met the study criteria. Before completing the questionnaire, respondents were informed about the purpose of the study, completion procedures, data confidentiality, and the voluntary nature of participation. Respondents provided consent through an *informed consent* form. The data were used solely for research purposes and were not reported in a manner that could identify individual respondents. After data collection, the responses were screened based on respondent eligibility, completeness of responses, potential duplicate submissions, and score range consistency. Verification through the respective lecturers was used to confirm respondents' eligibility in relation to the Pancasila Education course and their experience with blended learning, rather than as evidence of instrument validity.

Data Analysis Technique

The data obtained in this study were analyzed using a quantitative descriptive method with R software. The analysis involved calculating frequency distributions and percentages for each questionnaire item, computing mean scores for each indicator, and interpreting readiness levels based on a five-point Likert scale. This readiness scale comprises five categories: very unprepared (1.00–1.80), unprepared (1.81–2.60), moderately prepared (2.61–3.40), prepared (3.41–4.20), and very prepared (4.21–5.00). The analysis results are presented through tables, graphs, and narrative descriptions to provide a comprehensive and in-depth overview of the readiness level for implementing blended learning in the Pancasila Education course at UBSI.

Result and Discussion

Instrument Validity and Reliability

Before the main analysis, the quality of the research instruments was evaluated empirically. Item validity was assessed using the Pearson product-moment correlation between each item score and the total score, while internal consistency was evaluated using Cronbach's alpha. The analyses were conducted separately for the student and lecturer instruments because the two instruments differed in their dimensions and number of items.

Table 2. Results of Item Validity and Reliability Analysis

Instrument	Number of Items	Valid Items	Invalid Items	Item-Total Correlation	Cronbach's Alpha
Student readiness	21	21	0	0.665–0.811	0.961
Lecturer readiness	15	15	0	0.773–0.981	0.969

The validity analysis showed that all 21 items in the student instrument and all 15 items in the lecturer instrument met the validity criterion. The item-total correlation coefficients ranged from 0.665 to 0.811 for the student instrument and from 0.773 to 0.981 for the lecturer instrument. The reliability analysis produced Cronbach's alpha coefficients of 0.961 for the student instrument and 0.969 for the lecturer instrument, indicating high internal consistency. All items were therefore retained for the descriptive analysis.

Student Readiness for Blended Learning

A total of 130 students participated in the study. Student readiness for implementing blended learning in the Pancasila Education course was assessed through digital competence, technology access, and learning motivation. Analysis was done by descriptive statistics, which were mean and standard deviations of each aspect. The results of the analysis are presented in Table 3.

Table 3. Descriptive Statistics of Student Readiness

Dimension	Mean	Standard Deviation	Category
Digital competence	3.65	1.11	Prepared
Technology access	2.88	1.45	Moderately Prepared
Learning motivation	3.68	1.16	Prepared

The descriptive statistics in Table 3 indicate the overall level of student readiness based on the mean scores and standard deviations. However, the mean score alone may mask differences in the distribution of individual responses within each dimension. To provide a more comprehensive description of student readiness, the respondents were subsequently classified into five readiness categories based on the predetermined theoretical intervals. Table 4 presents the frequency and percentage of students in each category for digital competence, technology access, and learning motivation.

Table 4. Distribution of Student Preparedness Categories

Dimension	Not Prepared	Less Prepared	Moderately Prepared	Prepared	Highly Prepared
Digital competence	0 (0.0%)	25 (19.2%)	36 (27.7%)	29 (22.3%)	40 (30.8%)
Technology access	35 (26.9%)	17 (13.1%)	29 (22.3%)	27 (20.8%)	22 (16.9%)
Learning motivation	0 (0.0%)	29 (22.3%)	27 (20.8%)	30 (23.1%)	44 (33.8%)

The distribution provides a more detailed picture of student readiness than the mean scores alone. For digital competence, the largest proportion of students was classified as Highly Prepared (30.8%), followed by Moderately Prepared (27.7%) and Prepared (22.3%). Although no students were classified as Not Prepared, 19.2% were classified as Less Prepared, indicating that preparedness was not uniform across the student group.

Technology access showed the most dispersed distribution. The largest proportion of students was classified as Not Prepared (26.9%), while 22.3% were Moderately Prepared, 20.8% Prepared, 16.9% Highly Prepared, and 13.1% Less Prepared. This distribution reinforces the finding that technology access was the weakest student dimension. It also explains the relatively large standard deviation of 1.45.

Learning motivation showed the most favorable distribution. The largest proportion of students was classified as Highly Prepared (33.8%), followed by Prepared (23.1%), Less Prepared (22.3%), and Moderately Prepared (20.8%). No students were classified as Not Prepared. This pattern is consistent with the highest mean score obtained for this dimension. This pattern is also evident in Figure 2, where the distribution of scores for technology access appears much wider than that of the other two aspects.

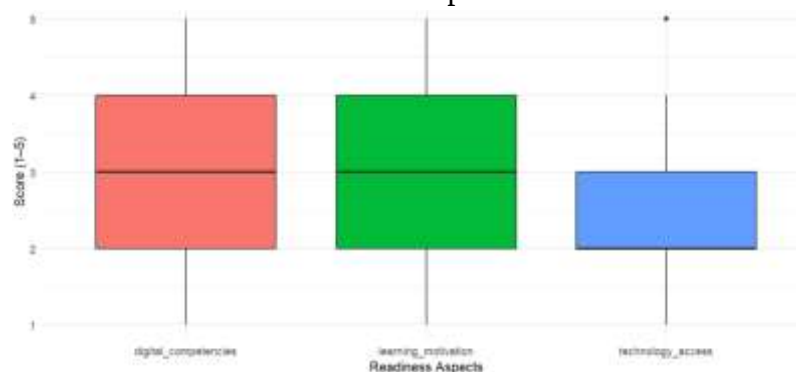


Figure 2. Visualization of Student Readiness Score Distribution

The boxplot provides additional evidence of differences in the distribution of the three student dimensions. Digital competence and learning motivation have similar central positions, whereas technology access has a lower central tendency. Technology access also shows comparatively greater variation, consistent with its larger standard deviation.

Digital competence was classified as Prepared ($M = 3.65$, $SD = 1.11$). This indicates that students generally perceived themselves as capable of using digital technologies to support academic activities. However, the distribution shows that a meaningful proportion of students remained below the Prepared category. Thus, the overall mean should not be interpreted as evidence of homogeneous digital competence. The finding supports the multidimensional view of blended learning readiness. Digital competence provides the capacity to use digital technologies, but it does not automatically guarantee adequate access or sustained participation. Previous research has similarly identified digital competence as an important component of readiness for technology-supported learning (Cabero-Almenara et al., 2022; Shakeel et al., 2023).

Learning motivation recorded the highest mean ($M = 3.68$, $SD = 1.16$) and was classified as Prepared. The category distribution further shows that 33.8% of students were Highly Prepared and none were Not Prepared. This suggests that motivation represents a relative strength among the participating students. Motivation is particularly relevant to blended learning because students must participate across face-to-face and online environments and may be required to manage learning activities with greater autonomy. Previous research also identifies motivation as an important condition for technology-supported learning (Daniel et al., 2024; De Bruijn-Smolters & Prinsen, 2024). Nevertheless, the present study measures self-reported motivation, not actual engagement. Social desirability may therefore have influenced responses.

Technology access recorded the lowest mean ($M = 2.88$, $SD = 1.45$) and was classified as Moderately Prepared. The boxplot and category distribution indicate that this dimension was not only lower on average but also more heterogeneous. More than one-quarter of students (26.9%) were classified as Not Prepared, while only 16.9% were Highly Prepared. This finding highlights the importance of enabling conditions in blended learning. Students may have adequate digital competence and motivation but still experience limitations in accessing the technology required for participation. This is consistent with the view that readiness involves both individual capacity and supporting conditions (Wagiran et al., 2022).

However, the study did not directly measure socioeconomic background, device ownership, internet quality, or household conditions. Therefore, the variation in technology access should not be interpreted as evidence of a particular form of structural inequality. Overall, student readiness demonstrates a differentiated pattern. Digital competence and learning motivation were Prepared, whereas technology access was Moderately Prepared. This finding supports the importance of treating readiness as a multidimensional construct rather than reducing it to a single overall score.

Lecturer Readiness in Blended Learning

Seven lecturers participated in the study. Lecturer readiness was assessed through digital competence, online assessment readiness, and teaching readiness. Because the lecturer sample was small, the results are interpreted descriptively and no inferential statistical analysis was conducted.

Table 5. Descriptive Statistics of Lecturer Readiness

Dimension	Mean	Standard Deviation	Category
Digital competence	4.57	0.53	Highly Prepared
Online assessment readiness	3.57	1.06	Prepared
Teaching readiness	4.00	0.82	Prepared

Digital competence recorded the highest mean score ($M = 4.57$, $SD = 0.53$) and was classified as Highly Prepared. Teaching readiness recorded a mean of 4.00 ($SD = 0.82$) and was classified as Prepared, while online assessment readiness recorded the lowest mean ($M = 3.57$, $SD = 1.06$) and was also classified as Prepared.

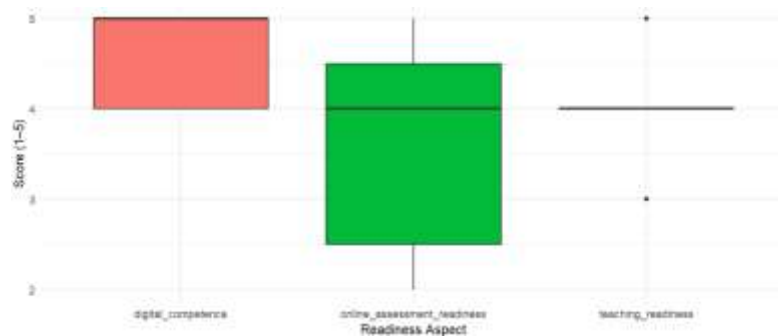


Figure 3. Visualization of Lecturer Readiness Score Distribution

The boxplot indicates that digital competence is concentrated toward the upper end of the scale, whereas online assessment readiness shows greater variation. Teaching readiness is centered around the Prepared range. Because only seven lecturers participated, each individual represents 14.3% of the observed group. Consequently, the visual distribution should be interpreted cautiously, and no observation is identified as an *outlier* solely on the basis of visual inspection. Digital competence recorded the highest mean ($M = 4.57$, $SD = 0.53$) and was classified as Highly Prepared. The relatively small standard deviation indicates comparatively consistent responses among the participating lecturers. This suggests that the lecturers generally perceived themselves as capable of using digital technologies to support academic activities.

However, high digital competence should not be equated with overall pedagogical readiness. Technical ability represents an important foundation, but teaching and assessment require additional pedagogical decisions concerning how technology is integrated into learning. This distinction is consistent with research emphasizing that lecturer readiness extends beyond technical competence (Junus et al., 2021; Howard & Tondeur, 2023).

Online assessment readiness recorded the lowest mean among the three lecturer dimensions ($M = 3.57$, $SD = 1.06$), although it remained classified as Prepared. Its relatively larger standard deviation indicates greater variation in lecturers' reported preparedness in this area. This finding is particularly relevant to Pancasila Education. Online assessment is not merely a technical process of delivering questions and recording scores. In a value-oriented course, assessment may need to provide opportunities for students to interpret values, formulate arguments, reflect on social and civic issues, and apply Pancasila principles to contextual situations. Therefore, preparedness to use online assessment technology does not necessarily demonstrate preparedness to develop authentic assessment

of value-oriented learning. The present study, however, did not directly measure assessment authenticity, value internalization, civic dialogue, or moral reflection. These aspects therefore remain pedagogical considerations rather than empirical outcomes established by the present study.

Teaching readiness recorded a mean of 4.00 (SD = 0.82) and was classified as Prepared. This indicates that the participating lecturers generally reported preparedness to plan and facilitate learning that integrates face-to-face and online activities. This dimension is particularly important in Pancasila Education because blended learning should preserve opportunities for interaction, discussion, reflection, and collaborative interpretation. Research on online Pancasila and Citizenship learning has shown that virtual interaction can support meaningful learning, student reflection, and awareness of participation when learning activities are designed collaboratively and reflectively (Rukmini et al., 2021). Similarly, value-based blended learning in Pancasila and Civic Education has emphasized the integration of values into learning activities rather than treating technology merely as a means of content delivery (Komalasari et al., 2023). Research on project-based blended learning in citizenship education also highlights student participation and collaborative learning as important components of learning in technology-supported environments (Kusnadi et al., 2023).

Therefore, teaching readiness should not be interpreted simply as the ability to transfer conventional course materials to an online platform. Rather, it concerns the ability to organize the two learning environments so that technology supports, rather than replaces, meaningful interaction and reflection. Overall, the lecturer results show that digital competence was Highly Prepared, while online assessment readiness and teaching readiness were Prepared. Online assessment readiness had the lowest mean and greatest variability, making it the most relevant dimension for further attention. Nevertheless, the small number of participating lecturers means that these findings should be interpreted as a descriptive profile rather than a general estimate of lecturer readiness.

Bibliometric Analysis

Bibliometric analysis was conducted as a supporting analysis to examine the development and thematic distribution of research on blended learning, particularly in relation to Pancasila Education and citizenship education. Publication data were compiled from the Scopus database and supplementary literature searches conducted on June 30, 2025. The bibliographic dataset consisted of 19 Scopus-indexed publications and 100 publications identified through supplementary searches, covering the period from 2017 to 2025.

The retrieved bibliographic data were analyzed using VOSviewer through keyword co-occurrence analysis. The analysis was used to visualize the relationships among research terms and to identify the thematic position of blended learning, Pancasila Education, citizenship education, implementation, learning models, and related educational themes within the existing literature. The resulting network visualization was interpreted based on

the occurrence and interconnectedness of keywords rather than as evidence of the effectiveness of particular learning approaches.

The bibliometric analysis served as supporting evidence for contextualizing the research gap. The research gap was not determined solely from the absence or frequency of individual keywords but was established through the synthesis of the mapped literature and examination of aspects that remain insufficiently addressed in previous studies. In particular, the mapping was used to contextualize the limited attention given to the readiness of both students and lecturers for blended learning specifically within Pancasila Education.

Conclusion

Based on the responses of 130 students and 7 lecturers, the study shows distinct patterns of readiness for blended learning in the Pancasila Education course. Among students, digital competence ($M = 3.65$) and learning motivation ($M = 3.68$) were classified as Prepared, whereas technology access ($M = 2.88$) was classified as Moderately Prepared and represented the lowest-rated dimension. Among lecturers, digital competence ($M = 4.57$) was classified as Highly Prepared, while online assessment readiness ($M = 3.57$) and teaching readiness ($M = 4.00$) were classified as Prepared. Online assessment readiness was the lowest-rated lecturer dimension and showed greater variation than the other lecturer dimensions. These findings describe the specific readiness profiles of the surveyed students and lecturers and identify the dimensions that warrant greater attention within each group.

Theoretically, the findings reinforce the view that readiness for blended learning in a value-oriented course should not be reduced to technical competence or technology access alone. It also requires consideration of pedagogical and normative dimensions related to how technology can support interaction, reflection, dialogue, and assessment aligned with the objectives of Pancasila Education. However, these pedagogical and normative processes were not directly measured in this study and therefore cannot be interpreted as empirical outcomes of the present research.

Practically, the findings suggest that institutional support should be tailored to the specific dimensions identified. For students, an audit of device and connectivity access may help identify the specific barriers underlying the relatively lower technology-access score, followed by targeted assistance where needed. For lecturers, professional development may focus on online assessment, particularly the design and evaluation of authentic technology-supported assessments that remain aligned with the value-oriented objectives of Pancasila Education. These recommendations are intended as potential responses to the observed readiness patterns rather than as evidence that such interventions will necessarily improve learning outcomes.

Several limitations should be considered. The study was conducted at one institution and used purposive sampling, limiting the generalizability of the findings beyond the surveyed respondents. The lecturer sample was small ($n = 7$), making the descriptive results sensitive to individual responses. The data were also based on self-reported perceptions and

may therefore be subject to response and social desirability bias. In addition, the instruments did not undergo expert judgment; their quality was evaluated empirically through item validity and internal consistency testing. The study also did not directly assess institutional readiness, infrastructure adequacy, implementation quality, learning outcomes, or the internalization of Pancasila values. Future research should therefore involve multiple institutions, larger and more diverse samples, further validation of the instruments including expert judgment, and measures of actual blended learning implementation and learning outcomes.

Declarations

Statement on the Use of Artificial Intelligence

Artificial intelligence (AI) tools were used during the preparation of this manuscript to assist with language editing, grammar checking, and improving the clarity and organization of the manuscript. AI tools were not used to generate, analyze, or interpret the research data. The authors remain fully responsible for the accuracy, originality, interpretation, and final content of the manuscript.

Author Contribution Statement

Yessica Mega Aprita contributed to the conceptualization, methodology, investigation, data curation, formal analysis, visualization, and interpretation of the study findings. The author was also responsible for writing the original draft and reviewing and editing the manuscript, and approved the final version of the manuscript.

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Conflict of Interest

The author declares that there are no financial, professional, or personal conflicts of interest that could have influenced the conduct of the research or the publication of this article.

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