



Investigating the Pedagogic Competence of Pre-Service High School Teachers in Terms of Learning Planning Abilities

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Article Info

Article history:

Received October 18, 2023

Revised December 9, 2023

Accepted January 12, 2024

Available Online April 30, 2024

Keywords:

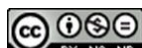
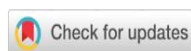
Ability to plan innovative lessons;

Merdeka curriculum;

Pedagogic competence;

ABSTRACT

One factor that determines teachers' success in teaching is the teacher's ability to plan lessons. Careful and good lesson planning can help create an effective learning environment, maximize students' potential, and increase their learning success. It also assists teachers in teaching in a more structured and directed manner, positively impacting student learning outcomes. Therefore, the purpose of this study was to investigate the ability of pre-service high school teachers to plan lessons based on the Merdeka Curriculum. This research is a descriptive study with 37 pre-service high school teachers as subjects. Data were collected using angles, portfolios, and interview sheets which were then analyzed using quantitative and qualitative approaches. Based on the results of data analysis, it was found that the pedagogic competence of pre-service high school teachers in terms of the ability to plan lessons according to the Merdeka Curriculum was 23% at a low level, 47% at a medium level, and 30% at a high level. Therefore, pre-service high school teacher's ability to plan to learn needs to be improved, especially in learning design scenarios and assessments. The results of this research contribute as input to related parties, in this case, the Institute of teacher education and Training Institutes, in developing teacher education and training programs that are relevant and adaptive to current educational developments.

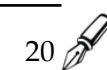


<https://doi.org/10.46627/silet>

INTRODUCTION

Introduction Education plays an essential role in creating a bright future for a nation. In facing the demands of an increasingly dynamic era, pre-service high school teachers must have strong pedagogical competence to provide innovative and quality learning (Khasanov, 2022; Gaybullaevna & Jonpulatovna, 2021). One of the crucial aspects of pedagogic competence is the ability to plan lessons that are effective and relevant to the times. With the Merdeka Curriculum, which gives schools the freedom to design learning that is more adaptive and creative, the analysis of the pedagogic competency of pre-service high school teachers becomes even more relevant and exciting to study.

The Merdeka Curriculum is an innovative step in the world of education, which allows schools to have the flexibility to design curricula and learning according to student characteristics, local needs, and global developments (Cahyono, 2022; Hadi et al., 2023). In this context, the ability to plan lessons is an essential key for pre-service high school teachers to create learning experiences that are fun, meaningful, and have a tangible impact on student development. Therefore, pre-service teachers must have good skills in planning lessons (Gabriele



et al., 2019; König et al., 2020; Kadarisma et al., 2019). Structured learning planning can clarify learning objectives so that students are more focused and motivated to learn and will support the desired learning outcomes. In addition, a structured learning plan can produce a clear and organized presentation of material. Students no longer struggle to understand the lesson's content because there is a logical flow or meaningful sequence. Likewise, students' learning styles, interests, and needs will increase in learning because they feel connected to the material presented.

However, based on the results of observations and analysis from previous research, the ability to plan structured learning for most school teachers still needs to be improved (Boltz et al., 2021; König et al., 2020). This results in the focus and learning objectives needing to be clarified, resulting in the desired learning outcomes needing to be easier to achieve. Students tend to feel bored or unchallenged by learning activities, causing a waste of time that could be used for more productive things (Nurtanto et al., 2021). In addition, learning planning needs to pay attention to the applicable curriculum standards, resulting in gaps between what is taught and what students should learn. It is, of course, detrimental to students in facing exams or other academic challenges. Therefore, educators need to plan lessons carefully to avoid these negative impacts. Good planning involves setting clear goals, selecting relevant material, using teaching strategies that suit student needs, and ongoing assessment to measure student understanding.

Based on these problems, it is necessary to conduct an in-depth analysis of the learning planning component to find out what factors and aspects cause unstructured learning planning. So far, the research that has been carried out has only taken general pictures related to lesson planning as carried out by (1) Ardianti & Amalia (2022), who study the meaning of independence in lesson planning; (2) Apriyanti (2022) examines efforts to increase teachers' knowledge about the Merdeka Curriculum, especially in preparing lesson plans; (3) Purnawanto (2022) examines how to develop meaningful learning plans and Merdeka Curriculum assessments; (4) Damayanti & Muhroji (2022) analyzes teachers' difficulties in designing thematic learning for learning that implements an Merdeka Curriculum; (5) Huzaefah et al. (2023) explains in general how the teacher's ability to design lesson plans. Based on the results of these previous studies, research has yet to examine the ability to plan lessons in terms of all components of lesson planning as desired by the Merdeka Curriculum for high school teachers.

This research aims to conduct an in-depth investigation of the pedagogical competence of pre-service high school teachers, especially in terms of the ability to plan lessons based on the indicators and components of the Merdeka Curriculum. The essential aspects that are the focus of learning planning include: clear learning objectives, innovative teaching approaches, the use of technology in learning, efforts to integrate local and global aspects into the curriculum. Therefore, a comprehensive analysis of the pedagogical competence of pre-service high school teachers in the ability to plan lessons in the Merdeka Curriculum can provide a deeper understanding of educational endeavors that continue to grow and challenge and contribute to improving the quality of education at the high school level.

RESEARCH METHOD

This research is descriptive research with quantitative and qualitative approaches (Shekhar et al., 2019). The subjects of this study were 37 pre-service teachers who were studying in the final semester and had taken part in the program of Introduction to the School Field at a senior high school in one of the universities in East Java. The data collection technique used was an open questionnaire via Google form and a portfolio assessment rubric in the form of a learning planning document. The data obtained is then tabulated to be analyzed qualitatively and quantitatively. Response data from the questionnaire were analyzed qualitatively using triangulation techniques, while portfolio assessment data were analyzed quantitatively with descriptive statistics and then classified based on Table 1.

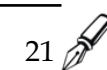


Table 1. Level of learning planning ability

Score	Level of Planning Ability
$71 < L \leq 100$	High
$57 < L \leq 71$	Medium
$L \leq 57$	Low

The aspects that were asked in the questionnaire and the interview included the readiness and habits of pre-service teachers in designing lesson plans. In addition, what are the efforts of pre-service teachers in solving problems when planning to learn while they are carrying out the program of Introduction to the School Field. As for the learning planning portfolio assessment, the aspects assessed are subject identity, initial competency, and profile of Pancasila students, facilities and infrastructure, target students, learning models, learning components, learning scenarios, learning assessment designs, remedial learning, enrichment learning, and attachments.

RESULTS AND DISCUSSION

Results

The ability profile of pre-service teachers in planning learning is essential for users because this aspect is one of the aspects included in pedagogic competence. In addition, the profile data can be used by TTIs in designing educational lectures that equip pre-service teachers with planning skills. From the results of the analysis that has been carried out, as shown in Table 2, it turns out that the responses of pre-service teachers to a series of open questions vary widely.

Table 2. Description of the learning planning abilities of pre-service high school teachers

Questions	Responses (%)
<i>Do you have clear and specific learning objectives for each lesson?</i>	
a. Yes	94.59
b. No	5.41
<i>How do you determine effective learning strategies to achieve learning objectives?</i>	
a. Through curriculum analysis and learning outcome	18.92
b. Taking into account the student's learning style	37.84
c. Based on previous teaching experience	32.43
d. Others (please specify)	10.81
<i>How well do you put together a weekly or monthly study plan?</i>	
a. Excellent	35.14
b. Good	45.95
c. Enough	13.51
d. Not good	5.41
<i>How do you adapt the lesson plan to the needs and level of understanding of students?</i>	
a. Through initial and formative assessments	27.03
b. By observing student responses in class,	37.84
c. Based on intuition and experience	29.73
d. Others	5.41
<i>Do you integrate technology and learning media in lesson planning?</i>	
a. Yes, actively and planned	18.92
b. Yes, but only sometimes	43.24
c. No, no chance yet	35.14
d. No, not familiar with learning technology	2.70
<i>How do you structure learning activities that are interesting and relevant to students?</i>	
a. By looking for various references and learning resources	29.73
b. By discussing with fellow teachers	45.95
c. Based on an existing handbook or curriculum	18.92
d. Others	5.41

Questions	Responses (%)
<i>How often do you reflect and evaluate the lesson plan after class?</i>	
a. Every day	5.41
b. Every week	35.14
c. Each month	32.43
d. Seldom	21.62
e. Never	5.41
<i>Do you frequently collaborate with fellow teachers to plan better lessons?</i>	
a. Yes, regularly	8.11
b. Yes, sometimes	40.54
c. No, there's rarely a chance	45.95
d. No, they feel quite capable of planning on their own	5.41
<i>How would you evaluate the success of the lesson plan?</i>	
a. Through test results and student assignments	37.84
b. By paying attention to students' participation and level of understanding	43.24
c. Through feedback from students	13.51
d. Others (please specify)	5.41
<i>Do you feel confident in your lesson planning skills?</i>	
a. Very confident	13.51
b. Self-confident	37.84
c. Confident Enough	32.43
d. Lack of confidence	13.51
e. Not confident at all	2.70

Nevertheless, the data in Table 2, of course, provides information that is still general, so it is still being determined which aspects should be given special attention. Therefore, more detailed data is needed to describe the pre-service teacher's ability to plan learning, as presented in Table 3. Regarding the planning component of the Merdeka Curriculum, the data analysis results showed that pre-service teachers' ability to plan learning is in the category currently.

Table 3. Level of planning ability for each component according to the Merdeka Curriculum

Learning Plan Component	Average Score	Level
Subject Identity	81.9	High
Initial Competency and Profile of Pancasila Students	70.4	Middle
Facilities and infrastructure	68.4	Middle
Target Students	80.6	High
Learning model	76.5	High
Learning Component	58.6	Middle
Learning Scenario	52.2	low
Learning Assessment Design	55.7	low
Remedial Learning	70.5	Middle
Enrichment Learning	69.7	Middle
Attachment	63.3	Middle
Average	68.0	Middle

Based on the data shown in Table 3, there are two planning components at a low level, namely the ability of pre-service teachers to develop learning scenarios and design assessment instruments. Meanwhile, the ability to plan learning at a high level is only in 3 components, namely writing down subject identities, writing down student targets, and writing learning models. Meanwhile, to describe the profile of learning planning abilities in terms of the percentage of pre-service teachers at high, medium, and low levels in each planning component can be seen in Figure 1.

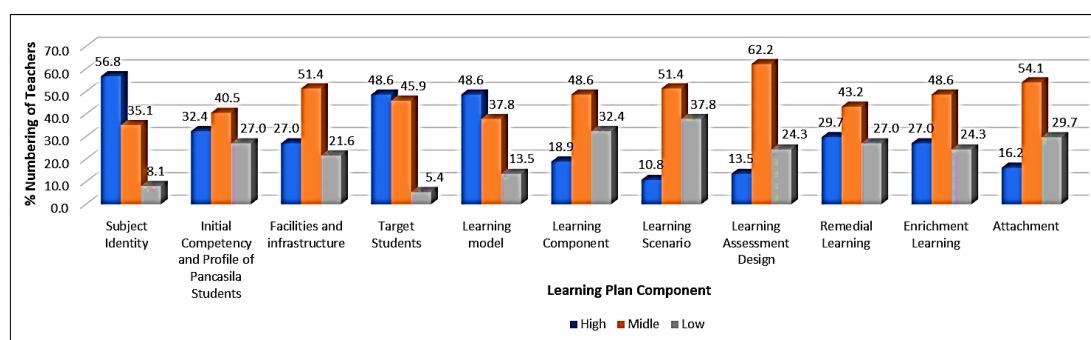


Figure 1. The percentage of pre-service teachers at each level in the planning component

Based on the data shown in Figure 1, it is clear that there are still many teacher candidates whose planning abilities are in the low category, such as the ability to identify competencies and profiles of Pancasila students, completeness of learning components such as models, methods and media, and in describing learning scenarios. Apart from that, the plans prepared are still incomplete in the form of attachments in the form of assessment instruments, student worksheets and student reading materials.

Discussion

Analysis of teachers' ability to plan lessons has a vital role in improving the quality of learning. Examining teacher capabilities helps ensure teachers deeply understand learning materials and effective teaching methods. Thus, teachers can plan quality learning following the expected educational standards. In addition, an analysis of the teacher's ability to plan lessons can provide information regarding the strengths and weaknesses related to the teacher's understanding of the curriculum and subject matter. It allows the teacher to plan relevant lessons according to students' needs.

Based on the questionnaire data analysis results related to the habits and preparations and the efforts made by pre-service teachers in designing lesson plans while implementing the program of Introduction to the School Field, as shown in Table 2, generally gave a positive response. However, the response of pre-service teachers still needs to be revised. It can be seen from questions related to determining effective learning strategies to achieve learning objectives, where only 18.92% of pre-service teachers answered that to determine learning strategies by conducting curriculum analysis and learning outcomes. Even though curriculum analysis shows how learning outcomes are achieved, the characteristics of the material being taught are the main steps in determining learning strategies. Determination of learning strategies is necessary because it is an approach used by educators to teach and help students achieve learning goals (Zlatović et al., 2015; Kizilcec et al., 2017), increase learning effectiveness (Varatharasan et al., 2019; Kintu et al., 2017), accommodate learning styles (Newton & Miah, 2017; Cohen & Henry, 2019), activate student participation (Jovanovic et al., 2017), encourage critical thinking (Retnawati et al., 2018; Loes & Pascarella, 2017), facilitate problem-solving (ElAdl & Polpol, 2020; Silitonga et al., 2020), enrich learning experiences (Jovanovic, 2017), adapt student development (Retnawati et al., 2018), overcome educational challenges (Lapitan et al., 2021), encourage student independence (Mitsea & Drigas, 2019), and assist in integrating technology (Broadbent, 2017). Therefore, learning strategies play an essential role in creating learning environments that are effective and inclusive and enable students to reach their full potential.

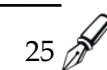
The data from Table 2 also reveals that most pre-service teachers use the results of observations in class compared to pre-tests and formative tests to adjust lesson plans and students' understanding levels. Both of these can be used, but it would be better if they collaborated so that all aspects of the assessment, namely cognitive, affective, and psychomotor, are included in the planning (William & Thompson, 2017; Martin, 2019). Likewise, with questions related to how they integrate learning media in the prepared plans, it turns out from the results

of data analysis that the dominant teacher does this. Still, only occasionally, and most teachers need more time to do it. Of course, this should be of particular concern to teacher-printing institutions that an effort needs to be made so that teachers have good knowledge and understanding regarding the importance of media in learning media (Widodo, 2018; Melati & Pratini, 2022). Learning media has a vital role in the educational process. Learning media, such as pictures, videos, animations, and audio, can make learning materials more exciting and attract students' attention. It helps encourage student engagement in learning, motivates them to understand the material better, and helps visualize abstract and complex concepts, thereby facilitating understanding. Thus, learning media is essential for creating compelling, engaging, and inclusive learning experiences (Puspitarini & Hanif, 2019). However, keep in mind that the use of appropriate and planned learning media by educators is significant to achieve optimal results.

In addition, another exciting thing that can be seen in Table 2 is that only 13.51% of pre-service teachers are confident about the planning documents that have been designed. It shows that the knowledge of pre-service teachers regarding how to design lesson plans in the Merdeka Curriculum still needs to be improved. It means that pre-service teachers must increase their knowledge of how to do good and correct planning (Nagro et al., 2019). Knowledge of lesson planning is vital in the educational context because it can determine a teacher's ability to identify clear learning objectives and formulate concrete steps to achieve them. In addition, planning knowledge also helps teachers ensure that each activity and material taught has relevance and a clear direction (Nurtanto, 2021), taking into account the diversity in needs (Chizhik, 2018) learning styles, levels of understanding (Backfisch et al., 2020), and interests of students (Wahyuni et al., 2019). Therefore, by understanding and mastering the concept of lesson planning, educators can create learning experiences that are more effective, directed and support optimal student development.

The low ability of pre-service teachers in terms of designing learning scenarios, as shown in Table 3, is due to the dominance of pre-service teachers not adjusting the learning stages to the syntax of the learning model used so that the learning steps are not clear and do not describe the learning model used. It will harm students, the learning environment, and overall learning outcomes (Tibahary & Muliana, 2018). The incompatibility of the syntax of the learning model in lesson planning will also impact the discrepancy with the student's learning style, making them feel uninvolved or need help understanding the material. It can result in decreased motivation to learn and academic performance (Gunawan, 2017), hinder deep understanding development (Retnawati et al., 2018), reduce classroom engagement and interaction (Bolliger & Martin, 2018), hinder students' ability to cope with real-world challenges (You, 2017), and unequal learning opportunities (Kizilcec et al., 2017). Therefore, educators need to adjust the learning steps with the syntax of the learning model according to the characteristics of students, learning objectives, and the context of the learning environment.

Likewise, the low ability of teachers in designing learning assessments is due to the dominance of pre-service teachers presenting learning assessments where the items made need to measure the achievement indicators set at the beginning. Of course, this significantly impacts the learning evaluation and measurement process (Ferreira, 2020). The items do not match the indicators of achieving the learning objectives, so the evaluation results may not accurately describe the extent to which students have achieved the learning objectives. It can lead to errors in assessing the true abilities of students (Efendi, 2021). In addition, it can cause distortions in the evaluation results, where students have achieved specific learning goals, so appropriate corrective or assistance actions are also challenging to determine. Therefore, it is essential to ensure that the items used in the evaluation and measurement of learning follow the indicators of achieving learning objectives (Rudini & Khasanah, 2022). It requires careful evaluation of instrument design and considers detailed learning objectives to make the results accurate and valuable for improving the learning process.



To create compelling and exciting learning, teachers need to plan lessons carefully. Teachers must understand the learning objectives in depth, both the general goals of the curriculum and the specific goals for each learning session. From here, the teacher can design learning steps that are concrete and closely related to these goals. Furthermore, variations in learning strategies are significant. Teachers must choose various methods, such as group discussions, projects, simulations, and media, to avoid monotonous learning and increase student involvement.

The Merdeka Curriculum is an educational concept that promotes freedom, creativity, and student empowerment in the learning process, so in planning learning, it is necessary to pay attention to student's needs and interests, flexibility, 21st-century skill development, technology integration, student involvement, learning that leads to project activities, an evaluation that authentic, and reflex activities (Purnawanto, 2022). The Independent Curriculum Approach emphasizes the importance of understanding the needs, interests, and abilities of individual students, so it is necessary to know students well to design learning that is relevant and interesting for them. The Independent Curriculum emphasizes flexibility in learning methods and approaches. Teachers also need to adapt learning methods according to student development, and the class needs to encourage the development of 21st-century skills in students, such as critical thinking skills, creativity, communication, and collaboration. Lesson planning must consider how these skills can be integrated into various activities (Hadi, et al., 2023). Likewise, technology can be a handy tool in supporting student-centered learning. Teachers need to consider how technology can facilitate more exciting and interactive learning so that students are more focused and interested in the material to be delivered. Through technology integration, student involvement can increase and give students greater responsibility in the learning process.

CONCLUSION

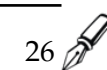
Based on the research and discussion results, pre-service teachers' ability is still in the moderate category, which means that more attention needs to be given, especially to Institute of teacher education as teacher-producing institutions. The most urgent aspect to pay attention to is the ability to design learning scenarios and the ability to design learning assessment instruments. **The implication** of this research can provide valuable insights for related parties in developing teacher education and training programs that are relevant and adaptive to current educational developments. **The limitations** of this research are the teacher's pedagogic competence which is analyzed only on the aspect of the ability to plan lessons and the sample just 37 pre-service teachers. Therefore, it is hoped that **future research** can analyze pedagogic competence in other aspects such as teaching ability, ability to develop teaching materials, and ability in class management of pre-service teachers with a large sample for the subject of research.

ACKNOWLEDGEMENTS

Thank you for STKIP PGRI Sitobondo that founded this research so it can conduct well. And also, thanks for all participant that help this research so this research can clean out.

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