

ANALYSIS OF TEACHER ERRORS IN APPLYING THE PROBLEM-BASED LEARNING MODEL IN THE TEACHER PROFESSIONAL EDUCATION PROGRAM-IN-SERVICE PROGRAM

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ABSTRACT

One element that contributes to realizing the process of developing the quality and potential of students is the curriculum. To teach students with 21st-century skills, namely critical thinking, creativity, innovation, collaboration, and mastering technology literacy, teachers competent in dealing with the demands of the 21st century are needed. One learning model that can improve critical thinking skills is the Problem-Based Learning model (PBL). (1) Background: This research analyzes teachers' mistakes in implementing problem-based learning models in the class; (2) Methods: This research method is qualitative and descriptive by collecting data through observation, interviews, and documentation.; (3) Results: The results of this research indicate that the teacher's mistake in applying PBL to learning planning is because the teacher has not understood and mastered the syntax of the problem-based learning (PBL) model; (4) Implications: the research showed a mismatch in the application of the syntax problem-based learning model with the lesson plan.

Keywords: mistakes; problem based-learning; teacher certification program

INTRODUCTION

One element that contributes to realizing the process of developing the quality and potential of students is the curriculum. The three main areas of education are educational management, student guidance, and curriculum; the curriculum is the core of education. The curriculum is an area that significantly influences students' development.¹ Indonesia is implementing the Merdeka Curriculum, which is still being tested in several schools. Previously, education in Indonesia used Curriculum 2013.² What these two curricula have in common are competencies that direct students to be able to think creatively and critically. Creative and critical thinking skills are essential thinking skills that will be-

¹ Anik Yuliani, Yaya Sukjaya Kusumah, and Jarnawi Afghani Dahlan, "Critical Thinking: How Is It Developed with the Experiential Learning Model in Junior High School Students?," *Al-Jabar : Jurnal Pendidikan Matematika* 12, no. 1 (June 15, 2021): 175–84, <https://doi.org/10.24042/ajpm.v12i1.8857>.

² Ade Novianti, Alwen Bentri, and Ahmad Zikri, "Pengaruh Penerapan Model Problem Based Learning (PBL) Terhadap Aktivitas Dan Hasil Belajar Siswa Pada Pembelajaran Tematik Terpadu di Kelas V Sekolah Dasar," *Jurnal Basicedu* 4, no. 1 (2020): 9.



increasingly necessary due to the increase in complex problems due to the rapid development of technology.³

Learning in the 21st century must prepare its generation to welcome the advancement of technology and communication in social life. To realize students with 21st-century skills, namely critical thinking, creativity, innovation, collaboration, and mastering technological literacy, teachers who are competent in facing the demands of the 21st century are needed. Through the demands of the 21st century, changes in education and learning must be made.⁴ David Conley argues that intellectual openness, curiosity, analysis, reasoning, argumentation, proof, interpretation, precision and accuracy, and problem-solving are vital cognitive strategies for successful learning.⁵

To be a professional educator, a teacher must have four competencies: pedagogic competence, personality competence, professional competence, and social competence.⁶ One of them is the professional competence of teachers. Professional is work done by a person and becomes a source of lifetime income that requires expertise, proficiency, or skills that meet specific quality standards or norms and requires professional education.⁷ Professional teachers must be able to carry out all stages of activities in the learning process with good management to get proper output in learning outcomes. The fact is that more teachers need more skills to implement learning.⁸ One of the steps to actualize professional teachers is to organize The Teacher Professional Education Program; this is the government's effort to prepare excellent professional teachers.⁹

³ Kani Ulger, "The Effect of Problem-Based Learning on the Creative Thinking and Critical Thinking Disposition of Students in Visual Arts Education," *Interdisciplinary Journal of Problem-Based Learning* 12, no. 1 (March 6, 2018), <https://doi.org/10.7771/1541-5015.1649>.

⁴ Hanifa Zulfitri, "Pendidikan Profesi Guru (PPG) sebagai Upaya Meningkatkan Profesionalisme Guru" 19 (2019): 7.

⁵ David T Conley, *Redefining College Readiness*, vol. 5th (Eugene: EPIC: Educational Policy Improvement Center, 2007).

⁶ PP Kemendikbud, "Peraturan Pemerintah RI Nomor 19 Tahun 2005 Tentang Standar Nasional Pendidikan" (Jakarta: Kementerian Pendidikan dan Kebudayaan., 2005).

⁷ Undang-undang, "Undang-Undang RI Nomor 14 Tahun 2005 Pasal 8 Tentang Kompetensi Guru" (Jakarta: Kementerian Pendidikan dan Kebudayaan., 2005).

⁸ Triyo Supriyatno and Umi Salamah, "Implementation of Curriculum Innovation and Islamic Education Learning Basic Education/Implementasi Inovasi Kurikulum dan Pembelajaran Pendidikan Agama Islam Pendidikan Dasar," *journal AL-MUDARRIS* 3, no. 1 (April 30, 2020): 1, <https://doi.org/10.32478/al-mudarris.v3i1.365>.

⁹ Farida Hanun, "Implementasi Penyelenggaraan Program Pendidikan Profesi Guru (PPG) Pendidikan Agama Islam di LPTK UIN Serang Banten," *EDUKASI: Jurnal Penelitian Pendidikan Agama dan Keagamaan* 19, no. 3 (December 16, 2021): 268–85, <https://doi.org/10.32729/edukasi.v19i3.1158>.

The Teacher Professional Education Program, or in Indonesian, we call PPG, is a further education that can be implemented after an undergraduate program to master teachers' competencies, following national education standards to obtain professional educator certificates.¹⁰ The general objective of the PPG program is to produce prospective teachers who can realize the goals of national education. The PPG program curriculum is designed regarding the quality to be addressed, the online learning process, workshops, Field Experience Practices or PPL, and student competency exams.¹¹ In the PPG program, three modules are studied, including pedagogic competencies, professional modules, learning tools, and learning media modules.¹² In the learning and learning theory sub-chapter in Learning Activity 3, the learning models prioritized in the implementation of Curriculum 2013 are inquiry-based learning, discovery learning, project-based learning, contextual teaching-learning, and problem-based learning.

Based on information from lecturers who teach students of The Teacher Professional Education Program at the State Islamic University of Sunan Kalijaga Yogyakarta in 2022, they saw that in applying the problem-based learning model, there were still mistakes that could be identified through the lesson plans designed by students of The Teacher Professional Education Program. The student needs help understanding the phases and behaviors to apply the problem-based learning model. This leads to different perspectives on syntax and what happens in the field to achieve learning objectives.

One of the learning models emphasized for PPG students is problem-based learning. Ravitz (2010) explains that Problem-based learning is a constructivist-based learning approach designed to support learning that involves more problems. So learners understand a concept and explain its importance and application in their learning.¹³ The main objective of problem-based learning is to enhance learners' application of knowledge, problem-solving, and self-learning skills by requiring them to understand and

¹⁰ Ristekdikti, "Pedoman Penyelenggaraan Pendidikan Profesi Guru" (Jakarta: Ristekdikti, 2018).

¹¹ Farida Hanun, "Implementasi Penyelenggaraan Program Pendidikan Profesi Guru (PPG) Pendidikan Agama Islam di LPTK UIN Serang Banten," *EDUKASI: Jurnal Penelitian Pendidikan Agama dan Keagamaan* 19, no. 3 (December 16, 2021): 268–85, <https://doi.org/10.32729/edukasi.v19i3.1158>.

¹² Kemenag, *Modul PPG* (Jakarta: Kemenag, 2022).

¹³ Emily E. Virtue and Brandi N Hinnant-Crawford, "'We're Doing Things That Are Meaningful': Student Perspectives of Project-Based Learning Across the Disciplines," *Interdisciplinary Journal of Problem-Based Learning* 13, no. 2 (September 27, 2019), <https://doi.org/10.7771/1541-5015.1809>.

solve problems actively. Problem-based learning is learner-centered, which requires them to direct their learning to determine what they know and do not know about the problem.¹⁴

Several teachers have shifted from traditional teaching methods to problem-based learning (PBL) models in recent years. Many argue that using PBL provides better performance in the academic field.¹⁵ Teachers are the main actors in learning to create conducive learning conditions in a fun and exciting learning atmosphere and provide opportunities for students to think actively, critically, creatively, and innovatively in exploring students abilities.¹⁶ The research that has been conducted shows that students find value in the hard work they do during learning and when completing tasks and that PBL works effectively.¹⁷ Research conducted by Ulger (2018) shows that the PBL approach significantly influences creativity, skills, critical thinking abilities, and the ability of learners to solve comprehensive problems.¹⁸ A PBL expert briefing teachers on implementing the PBL model said that teachers must consider the topics to be covered, how to make adequate instructions, and how assessments are formed.¹⁹

A common obstacle encountered when applying Project-Based Learning (PBL) lies in how educators reshape their teaching comprehension to align with a paradigm where learners and their inquiries lead in guiding instruction. Tamim and Grant (2013) pinpointed five hurdles teachers confront when implementing PBL: embracing the constructivist approach, adopting fresh instructional techniques, formulating curriculum and topic choices, overseeing and crafting PBL experiences, and upholding collaborative efforts.²⁰ This prior research analysis holds significance in this current investigation, as

¹⁴ David H. Jonassen and Woei Hung, "All Problems Are Not Equal: Implications for Problem-Based Learning," *Interdisciplinary Journal of Problem-Based Learning* 2, no. 2 (October 13, 2008), <https://doi.org/10.7771/1541-5015.1080>.

¹⁵ Hadist Awalia Fauzia, "Penerapan Model Pembelajaran Problem Based Learning Untuk Meningkatkan Hasil Belajar Matematika SD," *Primary: Jurnal Pendidikan Guru Sekolah Dasar* 7, no. 1 (April 26, 2018): 40, <https://doi.org/10.33578/jpkip.v7i1.5338>.

¹⁶ Sutrisno and Nurul Mahruzah Yulia, "Pengembangan Kompetensi Guru Dalam Mendesain Pembelajaran Pada Kurikulum Merdeka," *AL-MUDARRIS: Journal of Education* 5, no. 1 (2022), <http://dx.doi.org/10.32478/al-mudarris.v5i1.954>.

¹⁷ Emily E. Virtue and Brandi N Hinnant-Crawford, "'We're Doing Things That Are Meaningful': Student Perspectives of Project-Based Learning Across the Disciplines," *Interdisciplinary Journal of Problem-Based Learning* 13, no. 2 (September 27, 2019), <https://doi.org/10.7771/1541-5015.1809>.

¹⁸ Ulger, "The Effect of Problem-Based Learning on the Creative Thinking and Critical Thinking Disposition of Students in Visual Arts Education."

¹⁹ Marit Wijnen et al., "Students' and Teachers' Experiences With the Implementation of Problem-Based Learning at a University Law School," *Interdisciplinary Journal of Problem-Based Learning* 11, no. 2 (June 5, 2017), <https://doi.org/10.7771/1541-5015.1681>.

²⁰ Nahid Nariman and Janet Chrispeels, "PBL in the Era of Reform Standards: Challenges and Benefits Perceived by Teachers in One Elementary School," *Interdisciplinary Journal of Problem-Based*

it documents errors made by students in a PPG program while crafting PBL through their lesson plans. Within the PPG curriculum, students generated educational tools, including a workshop activity such as a lesson plan.

Therefore, this research will thoroughly explore the mistakes of The Teacher Professional Education Program in implementing problem-based learning through the lesson plan made. Based on this explanation, the Problem-based learning model has been applied by many teachers in recent years. Although it has been mandated, there are still teacher errors that are far from the syntax of PBL in its application. However, many argue that using PBL provides better performance in academics. This study aimed to analyze the causes of errors and get the views of the participants, who are the actors of the PBL model implementation.

RESEARCH METHODS

This research employs a qualitative research approach utilizing a case study design. The study's dataset originates from students enrolled in The Teacher Professional Education Program at Sunan Kalijaga Yogyakarta State Islamic University in 2022. The information gathered is qualitative and is derived from verbal expressions captured through observations, interviews, and documentation. The participants of this research consist of 21 students from The Teacher Professional Education Program at Sunan Kalijaga Yogyakarta State Islamic University in the same year. To enhance the research's credibility, various triangulation techniques were employed. Firstly, source triangulation was utilized to validate the data by cross-referencing information from diverse sources. Secondly, technique triangulation was employed to validate the data further, achieved by comparing data from the same source but using different methods. Further, data is validated by comparing data from the same source.

Data analysis was conducted iteratively until completion, leading to data saturation. The stages involved in the data analysis encompassed data collection, data analysis, and concluding.²¹ The research began with initial observations by observing learning videos

Learning 10, no. 1 (October 9, 2015), <https://doi.org/10.7771/1541-5015.1521>; Suha Tamim and Michael Grant, "Definitions and Uses: Case Study of Teachers Implementing Project-Based Learning," *Interdisciplinary Journal of Problem-Based Learning* 7, no. 2 (May 16, 2013), <https://doi.org/10.7771/1541-5015.1323>.

²¹ John W. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 4th ed (Thousand Oaks: SAGE Publications, 2014).

made by students. The observation used in this research is direct observation. The observation was conducted to see the extent to which students could explore the practice of learning implementation. This observation showed conclusion irregularities in how students compiled lesson plans. The preparation of the lesson plan is closely related to the learning practice. The researchers also used semi-structured interviews. The interviews were conducted virtually using Zoom to see how well the students understood the PBL model. All students were asked to answer questions according to their situation during the interview. The open-ended format allowed probing discussion of participants' views of the phenomenon.²² Furthermore, documentation in the form of a Lesson Plan prepared by students with problem-based learning (PBL) model.

Table 1.
Data of Participants

No	Name (Initial)	Gender	Lesson Plan
1.	FM	F	Sains
2.	F	F	Sains
3.	LS	F	Sains
4.	FM	F	Sains
5.	VMK	F	Sains
6.	ENH	F	Sains
7.	ASA	F	Sains
8.	PHS	M	Sains
9.	NYK	F	Sains
10.	M	F	Sains
11.	CZ	F	Sains
12.	IN	F	Sains
13.	YSA	F	Sains
14.	K	F	Sains
15.	WL	F	Sains
16.	NIN	F	Sains
17.	TJU	M	Sains
18.	PP	F	Sains
19.	EK	F	Sains
20.	AFI	M	Sains
21.	AP	F	Sains

RESULT

Based on the analysis results conducted through interviews and documentation of lesson plans prepared by PPG students of Sunan Kalijaga Yogyakarta State Islamic

²² Gregory Owen, "Qualitative Methods in Higher Education Policy Analysis: Using Interviews and Document Analysis," *The Qualitative Report* 19, no. 26 (June 30, 2014): 1–19, <https://doi.org/10.46743/2160-3715/2014.1211>.

University in 2022, the researcher took one sample of several lesson plans made. This shows that the mistakes that students make in applying problem-based learning are as follows:

1. Phase 1 Orientation students to the problem





<p>Tahap 1 : Orientasi peserta didik pada masalah Guru menampilkan benda-benda berikut</p> 	<p>Fase 1 Orientasi pada masalah</p> <p>IPA Mengamati</p> <p>1. Peserta didik mengamati gambar tentang susunan penyakit yang menyerang organ peredaran darah manusia di layar proyektor. (TPACK)</p>  <p>Menanya</p> <p>2. Peserta didik bertanya jawab dengan guru mengenai gambar darah. (Rasa lapik Tahi, Demam?)</p> <ol style="list-style-type: none"> Apa saja penyakit pada sistem peredaran darah manusia? Apa penyebab penyakit pada peredaran darah manusia? Bagaimana cara memelihara kesehatan organ peredaran darah?
<p>Fase 1 Orientasi pada masalah</p> <p>IPA Mengamati</p> <p>1. Peserta didik mengamati gambar tentang organ peredaran darah manusia yang ditampilkan guru di layar proyektor. (TPACK)</p>  <p>Menanya</p> <p>2. Peserta didik bertanya jawab dengan guru mengenai gambar darah. (Rasa lapik Tahi, Demam?)</p> <ol style="list-style-type: none"> Saya yang mengalami keluhan? Apakah warna darah itu? Dibagasi tubuh yang mana, kita menemukan darah? Apakah darah memiliki sistem peredaran? 	<p>Tahap 1 : Orientasi peserta didik pada masalah</p> <p>9. Guru meminta siswa untuk mengamati gambar yang ada pada <i>power point</i>.</p> <p>10. Siswa diberikan pertanyaan terkait gambar yang diamati misalnya :</p> <ul style="list-style-type: none"> - Gambar apakah itu, nak? - Apa jenis penyakit yang dapat menyerang organ pada gambar tersebut? - Bagaimana kira-kira cara mencegah agar tidak terserang penyakit yang dapat menyerang organ pada gambar tersebut? <p>11. Siswa dan guru melakukan tanya jawab sampai siswa bisa masuk dalam masalah / materi yang akan disampaikan.</p> <p>12. Guru melakukan klarifikasi</p>
<p>Pembelajaran Bahasa Indonesia</p> <p>1. Mengorientasi peserta didik pada masalah Peserta didik diminta mengamati gambar/foto</p>  <p>• Peserta didik diminta membaca serany teks eksplanasi ilmiah tentang biografi B.J Habibie yang terdapat di buku</p>	<p>Fase 1 Orientasi peserta didik pada masalah</p> <p>1. Peserta didik mengamati <i>power point</i> tentang hal dan kewajiban bertetangga (Mengamati) (Technological Knowledge)</p> <p>2. Peserta didik melakukan tanya jawab dengan guru (Menanya, mengumpulkan informasi) (Critical Thinking and Problem solving)</p> <ul style="list-style-type: none"> - Apa saja kewajiban warga terhadap tetangganya? - Apa saja hal seseorang yang harus diperbaiki dari tetangga? (Creativity and Innovation)

Figure 1. Sample lesson plans in Phase 1

Figure 1 shows the lesson plan in phase 1, which contains students being instructed to observe and gather information through pictures or power points.

2. Phase 2 Organizing students for study

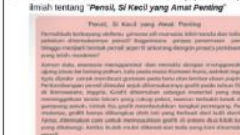
<p>Fase 2 Mengorganisasi siswa dalam belajar</p> <p>Mengumpulkan Informasi</p> <p>2. Peserta didik menyimak video tentang sistem peredaran darah. (TPACK)</p> <p>Link : (https://youtu.be/QLuMrGzGkE)</p> <p>Sistem Peredaran Darah Manusia Seperti Ini (Lihat Langsung Pahala)</p> <p>3. Peserta didik mencatat setiap hal penting yang didapatkan dari kegiatan membaca dan menyimak video.</p> <p>4. Peserta didik mengamati video yang ditampilkan guru di layar proyektor. (TPACK)</p> <p>5. Peserta didik menyanyi tentang sistem peredaran darah pada manusia dengan <i>musik potong bebek angus</i></p> <p>link you tube lagu : https://youtu.be/TSYvyp3DfUc</p>	<p>Tahap 2 : Mengorganisasikan peserta didik untuk belajar</p> <p>13. Siswa mempelajari bersama tayangan slide materi yang ada pada layar</p> <p>14. Siswa membaca buku <i>Bupena 5B</i> hal 49-50</p> <p>15. Siswa dibagi menjadi 7 kelompok (<i>Collaboration</i>).</p> <p>16. Guru membagikan LKPD, siswa menuliskan nama kelompoknya</p>
<p>2. Mengorganisasikan siswa untuk belajar</p> <ul style="list-style-type: none"> • Peserta didik diminta membaca serany teks eksplanasi ilmiah tentang "Pensi, Si Kecil yang Amat Penting"  <p>Tahap 2 : Mengorganisasi peserta didik untuk belajar</p> <ul style="list-style-type: none"> ➢ siswa dibagi menjadi beberapa kelompok ➢ Setiap kelompok menyediakan alat dan bahan percobaan ➢ siswa diberikan LKPD ➢ Setiap anggota kelompok menyajikan informasi perubahan wujud benda. 	<p>2. Peserta didik melakukan tanya jawab dengan guru (Menanya, mengumpulkan informasi) (Critical Thinking and Problem solving)</p> <ul style="list-style-type: none"> - Apa saja kewajiban warga terhadap tetangganya? - Apa saja hal seseorang yang harus diperbaiki dari tetangga? (Creativity and Innovation) <p>Tetangga Baru</p> <p>Fase 2 Mengorganisasikan peserta didik untuk belajar</p> <p>6. Peserta didik menempati tempat duduk berfasukan kelompok yang dibagikan sebelumnya secara heterogen (Peserta didik sudah dibagikan kelompok tetap). (<i>Gotong royong-PPK</i>)</p> <p>7. Guru membagikan LKPD kepada peserta didik.</p>
<p>Fase 2 Mengorganisasi siswa dalam belajar</p> <p>Mengumpulkan Informasi</p> <p>2. Peserta didik menyimak video tentang penyakit yang menyerang organ peredaran darah. (TPACK)</p> <p>Link https://youtu.be/QLuMrGzGkE</p> <p>3. Peserta didik mencatat setiap hal penting yang didapatkan dari kegiatan membaca dan menyimak video.</p> <p>4. Peserta didik mengamati gambar dan video yang ditampilkan guru di layar proyektor. (TPACK)</p>	<p>Tahap 2 : Mengorganisasikan peserta didik untuk belajar</p> <p>13. Siswa mempelajari bersama tayangan slide materi yang ada pada layar</p> <p>14. Siswa membaca buku <i>Bupena 5B</i> hal 49-50</p> <p>15. Siswa dibagi menjadi 7 kelompok (<i>Collaboration</i>).</p> <p>16. Guru membagikan LKPD, siswa menuliskan nama kelompoknya</p>

Figure 2.
Sample lesson plans in Phase 2

Figure 2 shows the lesson plan for phase 2, which contains instructions for organizing learners after observing to start learning by dividing into groups.

3. Phase 3 Assisting independent and group investigations,

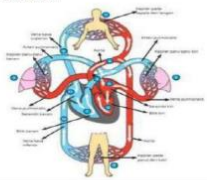
<p>Fase 3 Membimbing penyelidikan siswa secara mandiri/ kelompok</p>	<p>Menalar atau mengasosiasi - Critical thinking, Creativity 6. Peserta didik bertanya jawab mengenai sistem peredaran darah tersebut.</p>  <p>a. Bagaimana proses peredaran darah pada manusia? b. Apa fungsi pembuluh vena? c. Jelaskan kesimpulan gambar di atas! 7. Guru mengapresiasi jawaban dari peserta didik.</p> <p>Collaboration 8. Guru membagi peserta didik menjadi 4 kelompok yang masing-masing kelompok berjumlah 4 anak. 9. Guru membagikan LKPD IPA kepada peserta didik. 10. Guru menjelaskan langkah-langkah pengerjaan LKPD. 11. Melalui diskusi kelompok, peserta didik dapat mendesain peredaran darah pada manusia secara</p>	<p>Tahap 3 : Membimbing penyelidikan individu maupun kelompok 17. Siswa menyelesaikan Lembar Kerja Peserta Didik (LKPD) yang telah diberikan oleh guru (mengolah informasi) 18. Siswa mencari data/ informasi melalui sumber-sumber relevan yang diperlukan untuk memecahkan permasalahan di LKPD (mengumpulkan informasi) 19. Guru memantau kegiatan peserta didik dalam pengerjaan LKPD 20. Peserta didik berkonsultasi dengan guru jika ada hal-hal yang kurang jelas.</p>
<p>3. Membimbing penyelidikan individu maupun kelompok Guru mengamati peserta didik dengan berkeliling kelas sekaligus juga membantu jika ada peserta didik yang masih belum memahami langkah kerja</p>	<p>Tahap 3 : Membimbing Penyelidikan individu maupun kelompok. Guru membimbing siswa untuk menyiapkan alat dan bahan. Siswa melakukan percobaan perubahan benda cair. siswa mendiskusikan pertanyaan dan melakukan penyelidikan pada LKPD dalam kelompok. Siswa menjawab pertanyaan dan mempersiapkan laporan. Siswa dapat menggunakan buku tema untuk menunjang hasil diskusi. Guru berkeliling ketiap kelompok untuk memastikan masing-masing kelompok tidak ada kendala dalam melakukan percobaan.</p>	<p>Fase 3 Membimbing penyelidikan individu dan kelompok 9. Guru membimbing peserta didik mengerjakan LKPD</p> <p>Tahap 3 : Membimbing penyelidikan individu maupun kelompok 17. Siswa menyelesaikan Lembar Kerja Peserta Didik (LKPD) yang telah diberikan oleh guru (mengolah informasi) 18. Siswa mencari data/ informasi melalui sumber-sumber relevan yang diperlukan untuk memecahkan permasalahan di LKPD (mengumpulkan informasi) 19. Guru memantau kegiatan peserta didik dalam pengerjaan LKPD 20. Peserta didik berkonsultasi dengan guru jika ada hal-hal yang kurang jelas.</p>

Figure 3.
Sample lesson plans in Phase 3

Figure 3 shows the lesson plan in phase 3, which contains the teacher guiding students by giving individual or group tasks to identify the problems they find.

4. Phase 4 Develop and present artifacts and exhibitions,

<p>22. Siswa mengkomunikasikan hasil identifikasi yang berkaitan dengan ciri-ciri, jenis, isi dan makna pantun (Communication) 23. Siswa membacakan pantun hasil karya sendiri dengan lafal, intonasi, dan ekspresi yang tepat (Communication) 24. Siswa mengidentifikasi gangguan pada organ peredaran darah manusia dan cara pencegahannya dengan menonton video. (Critical Thinking, Problem Solving) 25. Siswa membuat diagram tentang macam-macam gangguan pada organ peredaran darah manusia dan cara pencegahannya secara berkelompok pada LKPD. Siswa berdiskusi (Collaboration, Gotong Royong, Creative and Innovation).</p>	<p>Fase 4 Collaboration 1. Guru membagi peserta didik menjadi 4 kelompok yang masing-masing kelompok berjumlah 4 anak. 2. Guru membagikan LKPD IPA kepada peserta didik. 3. Guru menjelaskan langkah-langkah pengerjaan LKPD. 4. Melalui diskusi kelompok, peserta didik mengidentifikasi permasalahan praktik yang mengganggu peredaran darah dalam tubuh manusia dan cara pencegahannya. 5. Peserta didik menonton video tentang macam-macam gangguan praktik yang mengganggu peredaran darah manusia dan cara pencegahannya. 6. Guru memantau kegiatan dan membantu siswa jika ada hal-hal yang kurang jelas.</p>
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<p>Fase 4 Mengembangkan dan menyajikan hasil karya</p> <p>15. Peserta didik mengisi LKPD hasil diskusi bersama kelompoknya. (<i>Tanggung Jawab</i>)</p> <p>16. Peserta didik menampilkan hasil diskusi dan percobaan kelompoknya. (<i>Communication-Skill</i>)</p>	<ul style="list-style-type: none"> ➢ Peserta didik mencatat hasil penyelidikan kelompok dalam Lembar Kerja Peserta Didik (LKPD) ➢ Peserta didik mengolah hasil penyelidikan yang diperoleh dari kelompoknya. ➢ Peserta didik menjawab pertanyaan pada LKPD
<p>➢ Fase 4 Mengembangkan dan menyajikan hasil karya</p> <p>10. Peserta didik mempresentasikan hasil pekerjaan peserta didik bersama kelompoknya. (<i>Mengomunikasikan</i>) (<i>Communication</i>) (<i>Creativity and Innovation</i>)</p> <p>11. Peserta didik yang lain mendengarkan teman yang sedang presentasi</p>	<p>4. Mengembangkan dan menyajikan hasil karya</p> <ul style="list-style-type: none"> • Peserta didik menuliskan informasi penting dari teks eksplanasi yang dibaca dengan menggunakan LKPD yang telah ditugaskan oleh guru • Peserta didik kemudian membuat kalimat dengan memperhatikan penggunaan kalimat efektif, dan menggunakan kosakata baku tersebut. • Peserta didik mengerjakan laporan yang terdapat di LKPD • Salah satu peserta didik memanggalkan hasil pekerjaannya. Apabila Peserta didik ada yang ingin menambahkan bisa dilakukan dengan mengangkat tangan

Figure 4.
Sample lesson plans in Phase 4

Figure 4 shows the lesson plan in phase 4, which contains students to develop and present work from the results of their discussion.

5. Phase 5 Analyze and evaluate the problem-solving process

<p>Tahap 5</p> <p>Mengajukan dan menguraikan permasalahan masalah</p> <ol style="list-style-type: none"> 1. Guru memberikan stimulus terhadap tugas kelompok peserta didik yang telah dipresentasikan. 2. Guru menganggapi dan menanggapi hasil kelompok. 3. Peserta didik menyajikan tugas individu (Larutan Hitung) 	<p>5. Merefleksi dan mengevaluasi proses pemecahan masalah</p> <ul style="list-style-type: none"> • Peserta didik mengemukakan penjelasan guru tentang bentuk kosakata baku dan kosakata tidak baku dalam teks eksplanasi tersebut
<p>Tahap 5 : Menganalisis dan mengevaluasi proses pemecahan masalah</p> <p>27. Guru membimbing siswa dalam menyimpulkan hasil diskusi yang telah disusun (percaya diri/PPK)</p> <p>28. Siswa diberikan kesempatan bertanya mengenai hasil presentasi temannya (<i>Critical thinking and communication/ Keterampilan abad 21</i>)</p> <p>29. Siswa dibimbing oleh guru untuk menanggapi pertanyaan yang disampaikan peserta didik lainnya. (<i>Critical thinking and communication/ Keterampilan abad 21</i>)</p>	<p>FASE 5 Menganalisis dan mengevaluasi proses pemecahan masalah</p> <ol style="list-style-type: none"> 12. Peserta didik dan guru mendiskusikan jawaban. (<i>Mengomunikasikan</i>) (<i>Collaboration</i>) 13. Peserta didik dan guru mengoreksi kekeliruan yang mungkin terjadi. (<i>Blog</i>) 14. Guru menjelaskan kalimat penyelesaian yang benar. (<i>Creativity and Innovation</i>)
<p>Fase 5 Menganalisis dan mengevaluasi proses pemecahan masalah</p> <p>17. Peserta didik dari kelompok lain dan guru menanggapi mengenai presentasi yang dilakukan kelompok penampil. (<i>Collaboration-4C</i>)</p> <p>18. Guru memberikan pengantar terhadap hasil diskusi.</p>	<p>Tahap 5</p> <p>Mengajukan dan menguraikan permasalahan masalah</p> <ol style="list-style-type: none"> 1. Peserta didik menyajikan hasil diskusi kelompok. 2. Peserta didik menguraikan hasil diskusi kelompok. 3. Peserta didik, secara bergantian dan membuat masalah, dan kemudian saling tanya-jawab yang telah dipresentasikan PPK, <i>Presentasi</i> 4. Guru memberi dan mendiskusikan hasil kelompoknya. 5. Guru menanggapi dan menanggapi hasil kelompok. 6. Peserta didik menyajikan tugas individu (Larutan Hitung)

Figure 5.
Sample lesson plans in Phase 5

Figure 5 shows the lesson plans in phase 5 containing the teacher providing stimulus and response to the work or presentation of the students.

DISCUSSION

This study analyzes teacher errors in applying problem-based learning models in the classroom through lesson plans made by PPG students. The focus of the analysis in this study looks at the suitability of PBL syntax with the activities that students write in the lesson plan. Based on the data results that have been displayed, the following is a discussion of each PBL syntax phase,

Table 2.
Results of analyzing the findings from the lesson plan

Phase	Findings
Phase 1 Orientation	<ul style="list-style-type: none"> • The lesson plans students make show that they must provide a clear picture of the problem to be solved. The activities written in the lesson plan show photographs, slideshows, and readings presented. • The problems presented are not genuine or tangible problems that exist in students' daily lives.

Phase 2 Organizing students for study	• The mistake lies in the absence of PPG students' guidance to students to work in groups. Learners are also not directed in their respective groups to independently divide tasks to find alternative solutions to the problem.
Phase 3 Assist independent and group investigation	• The activity carried out by students by working on the Student Worksheet provided by PPG Students.
Phase 4 Develop and present artifacts and exhibits	• Occur due to the previous step, where students work on the questions on the Learner Worksheet so that this phase becomes a place to correct their friends' work.
Phase 5 Analyze and evaluate the problem-solving process	• The teachers who have yet to be able to plan related to solving problems solved by students.

1. Phase 1 Orientation students to the problem

In phase 1: Orientation of learners by PBL syntax, the behavior that teachers must do is explain the objectives of the lesson, explain the logistics needed, propose phenomena or demonstrations or stories to raise problems and motivate learners to get involved in solving the selected issue. However, the lesson plans students make show that they must provide a clear picture of the problem to be solved. The activities written in the lesson plan show photographs, slideshows, and readings presented. Meanwhile, the starting point in learning is to develop a problem. In addition, the problems presented are not genuine or tangible problems that exist in students' daily lives. Students display images of chocolate, butter, ice cubes, and blood cancer with cartoon images.

PPG students should be able to develop a real problem that can be analyzed for students' starting points, such as telling things that commonly occur in the surrounding environment. For example, in blood circulation material, PPG students can tell the story of people who need blood donors, such as: What causes people to need blood donations? What are the criteria for blood that can be donated? And so on. From the emergence of these many questions, learners can start discovering and analyzing the problems that arise. James (2006) states in his research that prompting questions designed to be meaningful to learners and provide a clear framework can offer many opportunities for them to start investigating or analyzing problems in a real-world context.²³

2. Phase 2 Organizing students for study

²³ James D. Lehman et al., "Preparing Teachers to Use Problem-Centered, Inquiry-Based Science: Lessons from a Four-Year Professional Development Project," *Interdisciplinary Journal of Problem-Based Learning* 1, no. 1 (May 22, 2006), <https://doi.org/10.7771/1541-5015.1007>.

In this phase 2, the behavior that the teacher must carry out following the PBL syntax is to help learners to define and organize learning tasks related to the problem. For example, in the previous phase, PPG students can divide learners into groups and help learners start defining and managing problems that arise from blood donation. The problem-based learning model requires teachers to develop learners' collaboration skills and allow learners to investigate issues together. This is needed to help learners plan investigation and reporting tasks later.²⁴

However, in the lesson plan, it can be seen that the mistake lies in the absence of PPG students' guidance to students to work in groups. Learners are also not directed in their respective groups to independently divide tasks to find alternative solutions to the problem. On average, in this phase, PPG students distribute the Learner Worksheet, which already contains elements of answers or steps that students must take in solving problems. This phase does not follow the behavior the teacher must follow following the PBL syntax. This makes students not develop their thinking. Students need to think creatively and positively and solve problems themselves.

3. Phase 3 Assist independent and group investigation

In phase 3, the behavior teachers should encourage students to gather appropriate information, conduct experiments, obtain explanations, and solve problems. This phase is the core of the problem-based learning model. This phase involves the process of data collection and experimentation, making hypotheses, and explaining and providing solutions. During the data collection and experimentation process, the teacher encourages learners to collect data and conduct actual experiments until they understand the problem. Learners collect enough data to create and build their ideas; this phase is more than just reading books; it also helps manage through various sources.²⁵

However, the average error in this phase is the activity carried out by students by working on the Student Worksheet provided by PPG Students. Supposedly in phase 3, students carry out experiments or investigations, and the teacher can direct students to use references or literature prepared to support investigation or problem-solving. However, the activities here only work on the questions that PPG students have prepared.

4. Phase 4 Develop and present artifacts and exhibits

²⁴ Richard Arends, *Learning to Teach*, 9th ed, Connect, Learn, Succeed (Dubuque, Iowa: McGraw-Hill, 2012).

²⁵ Arends.

Teacher behavior in this phase is that the teacher assists learners in planning and preparing appropriate works such as reports, videos, and models. The teacher also helps and directs learners to share tasks with their friends. Errors in this phase occur due to the previous step, where students work on the questions on the Learner Worksheet so that this phase becomes a place to correct their friends' work. Should be in this phase, the teacher provides direction when students have difficulty presenting the work. For example, when students find it challenging to explain work in videos, teachers can recommend media or applications that students can use to make it easier to present work.

5. Phase 5 Analyze and evaluate the problem-solving process

This phase is the last in the problem-based learning model. In this phase, the teacher's behavior is to help learners to reflect on or evaluate their investigations and processes. Learners can reconstruct their thinking and activities during the various phases. The problem arises when the problem being studied or discussed is relatively minor. The PBL syntax stages can be completed in one meeting. If the problem is moderate, the five steps can be completed in 2-3 sessions; if the problem is complex, it may take longer. This is the fault of teachers who have yet to be able to plan related to solving problems solved by students.

CONCLUSION

Based on the results and discussion above, it can be concluded that the teacher's mistake in applying the problem-based learning model to PPG students at Sunan Kalijaga State Islamic University in 2022 is because the teacher has not understood and mastered the syntax of problem-based learning that should be done. The teachers should be able to prepare lesson plans with the problem-based learning model by the syntax that should be used. Based on this conclusion, the researcher recommends that especially PPG students or teachers be able to re-understand the syntax of PBL so that its application in the field can be appropriate and achieve goals.


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REFERENCES

- Arends, Richard. *Learning to Teach*. 9th ed. Connect, Learn, Succeed. Dubuque, Iowa: McGraw-Hill, 2012.
- Conley, David T. *Redefining College Readiness*. Vol. 5th. Eugene: EPIC: Educational Policy Improvement Center, 2007.
- Creswell, John W. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 4th ed. Thousand Oaks: SAGE Publications, 2014.
- Fauzia, Hadist Awalia. "PENERAPAN MODEL PEMBELAJARAN PROBLEM BASED LEARNING UNTUK MENINGKATKAN HASIL BELAJAR MATEMATIKA SD." *Primary: Jurnal Pendidikan Guru Sekolah Dasar* 7, no. 1 (April 26, 2018): 40. <https://doi.org/10.33578/jpkip.v7i1.5338>.
- Hanun, Farida. "Implementasi Penyelenggaraan Program Pendidikan Profesi Guru (PPG) Pendidikan Agama Islam di LPTK UIN Serang Banten." *EDUKASI: Jurnal Penelitian Pendidikan Agama dan Keagamaan* 19, no. 3 (December 16, 2021): 268–85. <https://doi.org/10.32729/edukasi.v19i3.1158>.
- Jonassen, David H., and Woei Hung. "All Problems Are Not Equal: Implications for Problem-Based Learning." *Interdisciplinary Journal of Problem-Based Learning* 2, no. 2 (October 13, 2008). <https://doi.org/10.7771/1541-5015.1080>.
- Kemenag. *Modul PPG*. Jakarta: Kemenag, 2022.
- Lehman, James D., Melissa George, Peggy Buchanan, and Michael Rush. "Preparing Teachers to Use Problem-Centered, Inquiry-Based Science: Lessons from a Four-Year Professional Development Project." *Interdisciplinary Journal of Problem-Based Learning* 1, no. 1 (May 22, 2006). <https://doi.org/10.7771/1541-5015.1007>.
- Nariman, Nahid, and Janet Chrispeels. "PBL in the Era of Reform Standards: Challenges and Benefits Perceived by Teachers in One Elementary School." *Interdisciplinary Journal of Problem-Based Learning* 10, no. 1 (October 9, 2015). <https://doi.org/10.7771/1541-5015.1521>.
- Novianti, Ade, Alwen Bentri, and Ahmad Zikri. "Pengaruh Penerapan Model Problem Based Learning (PBL) Terhadap Aktivitas Dan Hasil Belajar Siswa Pada Pembelajaran Tematik Terpadu di Kelas V Sekolah Dasar." *Jurnal Basicedu* 4, no. 1 (2020): 9.

- Owen, Gregory. "Qualitative Methods in Higher Education Policy Analysis: Using Interviews and Document Analysis." *The Qualitative Report* 19, no. 26 (June 30, 2014): 1–19. <https://doi.org/10.46743/2160-3715/2014.1211>.
- PP Kemendikbud. "Peraturan Pemerintah RI Nomor 19 Tahun 2005 Tentang Standar Nasional Pendidikan." Jakarta: Kementerian Pendidikan dan Kebudayaan., 2005.
- Ristekdikti. "Pedoman Penyelenggaraan Pendidikan Profesi Guru." Jakarta: Ristekdikti, 2018.
- Supriyatno, Triyo, and Umi Salamah. "Implementation of Curriculum Innovation and Islamic Education Learning Basic Education/Implementasi Inovasi Kurikulum dan Pembelajaran Pendidikan Agama Islam Pendidikan Dasar." *journal AL-MUDARRIS* 3, no. 1 (April 30, 2020): 1. <https://doi.org/10.32478/al-mudarris.v3i1.365>.
- Sutrisno, and Nurul Mahruzah Yulia. "Pengembangan Kompetensi Guru Dalam Mendesain Pembelajaran Pada Kurikulum Merdeka." *AL-MUDARRIS: Journal of Education* 5, no. 1 (2022). <http://dx.doi.org/10.32478/al-mudarris.v5i1.954>.
- Tamim, Suha, and Michael Grant. "Definitions and Uses: Case Study of Teachers Implementing Project-Based Learning." *Interdisciplinary Journal of Problem-Based Learning* 7, no. 2 (May 16, 2013). <https://doi.org/10.7771/1541-5015.1323>.
- Ulger, Kani. "The Effect of Problem-Based Learning on the Creative Thinking and Critical Thinking Disposition of Students in Visual Arts Education." *Interdisciplinary Journal of Problem-Based Learning* 12, no. 1 (March 6, 2018). <https://doi.org/10.7771/1541-5015.1649>.
- Undang-undang. "Undang-Undang RI Nomor 14 Tahun 2005 Pasal 8 Tentang Kompetensi Guru." Jakarta: Kementerian Pendidikan dan Kebudayaan., 2005.
- Virtue, Emily E., and Brandi N Hinnant-Crawford. "'We're Doing Things That Are Meaningful': Student Perspectives of Project-Based Learning Across the Disciplines." *Interdisciplinary Journal of Problem-Based Learning* 13, no. 2 (September 27, 2019). <https://doi.org/10.7771/1541-5015.1809>.
- Wijnen, Marit, Sofie M. M. Loyens, Guus Smeets, Maarten J. Kroeze, and Henk T. Van der Molen. "Students' and Teachers' Experiences With the Implementation of Problem-Based Learning at a University Law School." *Interdisciplinary Journal of Problem-Based Learning* 11, no. 2 (June 5, 2017). <https://doi.org/10.7771/1541-5015.1681>.
- Yuliani, Anik, Yaya Sukjaya Kusumah, and Jarnawi Afghani Dahlan. "Critical Thinking: How Is It Developed with the Experiential Learning Model in Junior High School Students?" *Al-Jabar : Jurnal Pendidikan Matematika* 12, no. 1 (June 15, 2021): 175–84. <https://doi.org/10.24042/ajpm.v12i1.8857>.
- Zulfitri, Hanifa. "Pendidikan Profesi Guru (PPG) sebagai Upaya Meningkatkan Profesionalisme Guru" 19 (2019): 7.