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Application of Problem-Based Learning Model to Improve Students' Understanding of Legal Protection for Female Workers

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Abstract: *This study analyzed the effectiveness of implementing the Problem-Based Learning (PBL) method in improving students' critical thinking skills and understanding of labor law courses, particularly the material on legal protection for female workers. The transformation of the contemporary legal education paradigm required a shift from a teacher-centered approach to student-centered learning that developed students' critical analysis skills. The research used a Classroom Action Research design with a qualitative-quantitative approach involving 32 students from the Law Study Program at Madako Tolitoli University in the fourth semester of 2024. The research was conducted in two learning cycles following the stages of planning, implementation, observation, and reflection. Data collection instruments consisted of structured observation sheets, critical thinking assessment rubrics covering six dimensions interpretation, analysis, evaluation, inference, explanation, and self-regulation and semi-structured interview guides, analyzed using a mixed-methods sequential explanatory design. The results showed a significant increase in students' critical thinking skills of 55.2% from the first cycle to the second cycle, with the average score rising from 2.48 to 3.85, and 87.5% of students achieved the good category, exceeding the established success indicators. The PBL method facilitated collaborative learning that developed multidimensional perspectives and metacognitive skills essential for professional legal practice. These findings confirmed social constructivism theory and contributed significantly to pedagogical innovation in legal education.*

Keywords: *PBL, Critical Thinking Skills, Labor Law Education, Legal Education*

Abstrak: Penelitian ini menganalisis efektivitas penerapan metode Problem-Based Learning (PBL) dalam meningkatkan keterampilan berpikir kritis dan pemahaman mahasiswa pada mata kuliah Hukum Ketenagakerjaan, khususnya materi perlindungan hukum bagi pekerja perempuan. Transformasi paradigma pendidikan hukum kontemporer menuntut pergeseran dari pendekatan teacher-centered menuju student-centered learning yang mengembangkan kemampuan analisis kritis mahasiswa. Penelitian menggunakan desain Penelitian Tindakan Kelas (PTK) dengan pendekatan kualitatif-kuantitatif yang melibatkan 32 mahasiswa Program Studi Hukum Universitas Madako Tolitoli pada semester genap 2024. Penelitian dilaksanakan dalam dua siklus pembelajaran mengikuti tahapan perencanaan, pelaksanaan, observasi, dan refleksi. Instrumen pengumpulan data terdiri dari lembar observasi terstruktur, rubrik penilaian berpikir kritis yang mencakup enam dimensi interpretasi, analisis, evaluasi, inferensi, penjelasan, dan regulasi diri serta panduan wawancara semi-terstruktur yang dianalisis menggunakan pendekatan mixed-methods sequential explanatory design. Hasil penelitian menunjukkan peningkatan signifikan keterampilan berpikir kritis mahasiswa sebesar 55,2% dari siklus pertama ke siklus kedua, dengan rata-rata skor meningkat dari 2,48 menjadi 3,85, dan sebanyak 87,5% mahasiswa mencapai kategori baik, melampaui indikator keberhasilan yang ditetapkan. Penerapan PBL terbukti efektif dalam mengembangkan kemampuan menginterpretasi informasi hukum, menganalisis argumen, mengevaluasi kredibilitas sumber, membuat inferensi logis, dan mengkomunikasikan penalaran hukum. Temuan ini mengkonfirmasi teori konstruktivisme sosial dan berkontribusi signifikan terhadap inovasi pedagogis dalam pendidikan hukum.

Kata Kunci: PBL, Keterampilan Berpikir Kritis, Pendidikan Hukum Ketenagakerjaan

INTRODUCTION

The transformation of the contemporary legal education paradigm requires a shift from a conventional teacher-centered approach to student-centered learning that emphasizes the development of critical thinking and problem-solving skills. Problem-Based Learning (PBL) as an innovative learning method has been proven effective in activating critical reasoning and analytical skills of students in various disciplines. In the context of legal education, the implementation of PBL is increasingly relevant given the complexity of legal issues that require a multidimensional approach and high synthesis skills from prospective legal practitioners. The theoretical framework of Problem-Based Learning developed by Barrows and Tamblyn emphasizes learning that begins with the presentation of authentic problems as stimuli for thinking and learning processes. In this context, students no longer play the role of passive recipients of information, but rather as active constructors of knowledge through a process of investigation, analysis, and synthesis (Ahmar, Budi, Ahmad, Mushawwir, & Khaidir, 2020) . The social constructivism theory underlying PBL assumes that learning occurs through social interaction and collaboration in solving complex problems relevant to students' future professional contexts.

Empirical research shows that the PBL method significantly improves students' critical thinking skills, problem-solving skills, and learning motivation compared to conventional learning methods (Ali, 2019) . Comparative studies confirm the superiority of PBL in developing students' critical thinking skills compared to conventional methods. Similar findings were presented by , which showed the effectiveness of PBL in improving critical thinking skills, confirming that the combination of PBL and problem posing results in a significant increase in students' analytical abilities. (Amalia & Hardini, 2020) in their study on pedagogical innovation in legal education emphasized that PBL can improve students' understanding of complex legal cases and develop applicable legal reasoning skills. Similar findings are confirmed by various studies showing that problem-based learning encourages students to develop deeper analytical skills and better knowledge transfer abilities. However, the implementation of PBL in legal education still faces various methodological and practical challenges. Research conducted by (Ayudya & Rahayu, 2020) identifies a significant gap between PBL theory and learning practices in legal education institutions. The majority of lecturers still rely on traditional approaches that emphasize the transfer of normative knowledge without providing opportunities for students to develop critical reasoning skills through the analysis of real cases. This condition results in law graduates who have adequate theoretical knowledge but are unable to apply that knowledge in solving complex legal problems in the field.

This pedagogical problem becomes even more crucial when linked to the complexity of legal material that requires an interdisciplinary approach. (Dewi, Ni Komang Arini Styawati, & I Wayan Arthanaya, 2022) emphasizes that modern legal education must be able to equip prospective practitioners with critical thinking skills and problem-solving skills that can be adapted to various real-life scenarios. In this context, PBL offers a pedagogical framework that allows students to develop these competencies through engagement with authentic problems relevant to professional legal practice. Previous research in the field of legal education shows that conventional learning methods often fail to prepare students for the complexities of contemporary legal practice. (Fatma, 2018) in his study of legal pedagogy emphasizes the need for methodological reform that can integrate theoretical reasoning with practical application. (Hakimi, Citra Widyasari, Mukarramah, &

Sari, 2024) further asserts that problem-based learning approaches can be an effective solution to bridge the gap between academic knowledge and professional competence in the field of law.

Although research on the effectiveness of PBL in various disciplines has been extensive, specific studies on the implementation of PBL in legal education are still limited. More specifically, there has not been much research exploring how PBL can be optimized to teach complex and multifaceted legal material to students. This research gap is becoming increasingly significant given the demands on law graduates to not only master normative aspects but also be able to analyze and solve legal problems with a holistic and critical approach. The context of legal education at Madako Tolitoli University presents an interesting phenomenon for in-depth study. Initial observations of the learning process in the Labor Law course indicate that students still have difficulty analyzing complex legal cases and formulating comprehensive solutions. Students' ability to identify legal issues, analyze causal factors, and formulate coherent legal arguments still needs to be significantly improved. This condition indicates the need for methodological innovations that can optimize the learning process and improve the expected learning outcomes.

The impact of labor policies on female workers is comprehensively analyzed by (Edi & Kumar, 2024) in their study on the protection of workers' rights through the Job Creation Law. The research (Arsawati, Swardhana, Hariyanto, & Bunga, 2024) provides a perspective on labor protection based on Indonesian positive law, while (Ariyani & Tego, 2021) explores legal protection for female workers in the hospitality sector. The significance of this research lies in its contribution to the development of a more effective and responsive legal learning methodology that meets contemporary professional demands. Theoretically, this research will enrich the literature on the implementation of PBL in the context of legal education, particularly in teaching material that requires multidimensional analysis. Practically, the findings of this research can be a reference for law educators in developing more engaging and effective learning strategies. The main objective of this research is to analyze the effectiveness of implementing the Problem-Based Learning method in improving students' understanding and critical thinking skills in the Labor Law course. This research will specifically evaluate how PBL can facilitate students in developing legal analysis skills, information synthesis skills, and the ability to formulate solutions to complex legal problems. Through this approach, this research hopes to make a significant contribution to pedagogical innovation in legal education.

The research " identifies the need for innovation in the PBL model with contextual teaching and learning in the era of the Industrial Revolution 4.0, while (Musakhonovich, Esirgapovich, Jaelani, Wan Khairuldin, & Luthviati, 2024) emphasizes the importance of scaffolding in the implementation of PBL for learners with low abilities. The hypothesis proposed in this study is that the implementation of the Problem-Based Learning method can significantly improve students' comprehension, critical analysis, and problem-solving skills in legal education compared to conventional learning methods. This assumption is based on social constructivism theory and empirical evidence from various previous studies that show the superiority of PBL in developing students' higher-order thinking skills in various disciplines.

METHOD

This study uses a Classroom Action Research (CAR) design with a qualitative-quantitative approach that aims to evaluate the effectiveness of implementing the Problem-Based Learning

method in improving students' critical thinking skills. This methodological approach is in line with the recommendations of the Ministry of Education, Culture, Research regarding the analysis of the application of problem-based learning models in students, which emphasizes the importance of systematic observation in evaluating learning effectiveness. The research participants were 32 students from the Law Study Program at Madako Tolitoli University who took the Labor Law course in the fourth (even) semester of 2024. The research was conducted in two learning cycles, where each cycle followed the stages of planning, action implementation, systematic observation, and evaluative reflection in accordance with the PTK model developed by (Haryanto & Resosudarmo, 2021) .

The data collection instruments in this study consisted of three main components systematically designed to measure various aspects of learning. First, a structured observation sheet developed based on the PBL pedagogical framework covering five main indicators: (1) the level of active student participation in class discussions using a 1-5 Likert scale, (2) the quality of legal arguments assessed based on logical coherence, appropriate use of legal principles, and critical analysis skills, (3) the ability to identify legal issues, measured by the accuracy and completeness of issue identification, (4) collaborative skills in group work, assessed by individual contributions and synergy, and (5) the ability to synthesize solutions, evaluated based on the creativity, feasibility, and comprehensiveness of proposed solutions to problems. Second, a critical thinking assessment rubric adapted from the Critical Thinking Assessment Framework, which covers six dimensions: the ability to interpret legal information, analyze arguments and evidence, evaluate the credibility of legal sources, make logical inferences from premises to conclusions, explain legal reasoning, and self-regulate the thinking process. Each dimension is assessed using a 4-level holistic scale (novice, developing, proficient, advanced) with specific descriptors for each level ( ). Third, a semi-structured interview guide consisting of 15 open-ended questions designed to explore students' perceptions of the effectiveness of PBL, learning experiences, challenges faced, and changes in critical thinking skills they have experienced.

The development of the instruments referred to the framework developed by the on the effectiveness of PBL in problem-solving skills, with adaptations from (Sari & Kristin, 2020) on measuring collaboration skills in problem-based learning. The validity of the research instrument was tested through expert judgment from three validators who are experts in legal education and one expert in educational measurement, with a Content Validity Index (CVI) of 0.87, indicating excellent content validity. The reliability of the observation sheet was tested using the inter-rater reliability technique involving two independent observers, resulting in a Cohen's Kappa coefficient of 0.82, indicating a very good level of agreement. The reliability of the critical thinking assessment rubric was tested using internal consistency reliability with a Cronbach's Alpha of 0.89, indicating high internal consistency.

The data analysis procedure used a mixed-methods sequential explanatory design approach, where quantitative data was analyzed first, followed by qualitative analysis to provide a more in-depth explanation. Quantitative data from observation sheets and assessment rubrics were analyzed using descriptive statistics and paired t-tests to compare pre-test and post-test scores using SPSS version 25 software. Qualitative data from narrative observations and interview transcripts were analyzed using the thematic analysis technique developed by Choi et al. (2024), which includes the stages of data familiarization, initial coding, theme search, theme review, theme definition, and

report writing. The coding process was carried out using NVivo 12 software with an inductive coding approach to identify emergent themes related to the effectiveness of PBL. The research success indicator was set at 85% of students obtaining a minimum score of 76 (Good category) in the critical thinking assessment rubric, with a minimum average score increase of 15% from the first cycle to the second cycle. The socio-legal approach applied in this study refers to a framework developed on the elements that constitute the rule of law, which emphasizes the importance of integrating sociological perspectives in legal analysis.

FINDINGS AND DISCUSSION

Findings

The implementation of the Problem-Based Learning method in Labor Law learning at the Madako Tolitoli University Law Study Program showed significant results in improving students' critical thinking and understanding abilities. The research, which was conducted in two learning cycles involving 32 students, produced comprehensive empirical data on the effectiveness of PBL in the context of legal education. The stages of PBL implementation, which were designed systematically, included six integrated learning phases. The first phase was problem orientation, in which the researcher, as a facilitator, presented a complex case of legal protection for female workers through a multimedia presentation that included visual data, case narratives, and documentation of issues relevant to the Labor Law curriculum. The complexity of the issue of legal protection for female workers, which is the focus of the case in this study, is in line with the findings of (Irianto, S., Otto, Pompe, S., Bedner, Vel, J., Stoter, & Arnscheidt, 2012) regarding the problems of legal protection for women after the ratification of the Job Creation Law. The study (Edi & Kumar, 2024) emphasizes a feminist perspective in the protection of women's labor rights, analyzing specific challenges during the COVID-19 pandemic. The complex regulatory context is reinforced by a study of legal protection constraints based on the CEDAW Convention and an analysis of various obstacles in the implementation of legal protection. A historical perspective is presented in their study of female labor protection based on the Manpower Act, while (Pradana, 2018) focuses on the legal protection of female and child workers.

The second phase is learning organization, where students form heterogeneous groups of 4-5 people to analyze cases collaboratively. The third phase is independent and group investigation, where students identify specific legal issues, analyze relevant legal bases, and collect supporting information from various primary and secondary sources. The fourth phase is the development and presentation of analysis results, where each group presents their findings in an interactive class discussion format. The fifth phase is the analysis and evaluation of the problem-solving process, where students reflect on the quality of the arguments and solutions produced. The sixth phase is learning reflection, where students evaluate the learning process and identify areas for further development.

Class observation data showed significant changes in learning dynamics from the first cycle to the second cycle. In the first cycle, the level of active student participation in class discussions reached an average of 2.8 on a scale of 5, with 34% of students showing optimal engagement in the discussion process. The quality of legal arguments produced by students in the first cycle still showed limitations in terms of logical coherence and the use of appropriate legal bases, with an average score of 2.6 on a maximum scale of 5. The ability to identify legal problems in the first

cycle reached an average score of 2.7, where students still had difficulty in identifying legal issues comprehensively and accurately. Collaborative skills in group work scored 2.9, with some groups still experiencing challenges in effective coordination and task distribution. The ability to synthesize solutions in the first cycle reached a score of 2.5, where students tended to produce normative solutions without considering practical and contextual aspects.

The implementation of the second cycle showed a substantial improvement in all learning indicators. The level of active student participation increased to an average of 4.2 on a scale of 5, with 78% of students showing optimal engagement in class discussions. This improvement was marked by the intensity of critical questions asked by students, the quality of responses to peers' arguments, and the contribution of innovative ideas in the discussion process. The quality of legal argumentation improved significantly to an average score of 4.1, with students demonstrating better ability to construct coherent arguments, use appropriate legal bases, and integrate legal principles with case facts. The ability to identify legal issues increased to an average score of 4.0, with students demonstrating more accurate abilities in identifying primary and secondary legal issues and analyzing the causal relationships between various factors affecting the case.

An analysis of the improvement in students' critical thinking skills based on a comprehensive assessment rubric shows encouraging progress. The dimension of legal information interpretation improved from an average of 2.4 on the pre-test to 3.8 on the post-test, with 75% of students reaching the proficient or advanced level. Students demonstrated improved ability in understanding the explicit and implicit meanings of legal texts, identifying the assumptions that underlie arguments ( ), and interpreting empirical data relevant to the case. The dimension of argument and evidence analysis increased from an average of 2.3 to 3.9, where students demonstrated more sophisticated abilities in analyzing argument structures, identifying premises and conclusions, and evaluating the strength of logical relationships between argument components. The improvement in mathematical problem-solving skills reported by (Edi & Kumar, 2024) shows a pattern consistent with the findings of this study, where PBL significantly improves students' analytical skills.

The dimension of evaluating the credibility of legal sources showed an increase from an average of 2.5 to 3.7, with students developing better abilities in assessing the authority of legal sources, identifying potential biases in information, and using systematic evaluative criteria in assessing the quality of evidence. The logical inference dimension progressed from an average of 2.2 to 3.8, with students demonstrating better abilities in drawing valid conclusions from given premises, identifying the logical implications of arguments, and developing testable hypotheses. The dimension of legal reasoning explanation increased from an average of 2.4 to 4.0, with students demonstrating better ability to articulate their thought processes, explain the basis for their choice of analysis strategy, and communicate the results of their reasoning in a clear and persuasive manner.

Students' reflections on the PBL learning process provide valuable insight into their subjective experiences during the implementation of this method. The results of semi-structured interviews with 12 purposively selected students revealed that 83% of students felt a significant improvement in their ability to analyze complex legal cases. Students reported that the PBL learning process allowed them to develop a more holistic understanding of legal issues, not only from a normative perspective but also from sociological and empirical aspects. A total of 75% of students stated that the PBL method increased their motivation to learn because of the relevance of the material to real issues they encounter in society.

Students also reported that the collaborative learning process in PBL enabled them to develop communication and negotiation skills that are essential in professional legal practice. A total of 67% of students stated that group discussions in PBL helped them develop a broader perspective on legal issues through exposure to various points of view from their peers. However, students also identified several challenges in the implementation of PBL, including the need for more intensive time for case preparation and analysis, as well as initial discomfort with the ambiguity inherent in complex legal cases. The effectiveness of collaborative learning in PBL is confirmed by the study " , which analyzes the implementation of HOTS and PBL in thematic learning during the COVID-19 pandemic.

A systematic comparison between the conditions before and after the implementation of PBL shows a substantial transformation in various aspects of learning. Before the implementation of PBL, students tended to adopt a passive learning approach and relied on the transfer of knowledge from lecturers. They showed limitations in analyzing cases independently and tended to memorize legal concepts without understanding their application in a practical context. Students' ability to integrate various sources of information was still limited, and they had difficulty developing coherent and persuasive arguments.

After the implementation of PBL, students showed a significant transformation in their approach to legal learning. They developed greater independence in the inquiry process and showed higher initiative in seeking relevant sources of information. Students' ability to analyze cases systematically improved substantially, with better ability to identify key issues, analyze causal factors, and formulate comprehensive solutions. Students also showed improvement in metacognitive abilities, where they became more aware of their own thinking processes and were able to identify areas for improvement.

Quantitative analysis of learning scores shows a statistically significant increase from the first cycle to the second cycle. The average score for students' critical thinking skills increased from 2.48 (developing category) in the first cycle to 3.85 (proficient category) in the second cycle, showing an increase of 55.2%. The paired t-test showed a significant difference ($t = -12.34$, $p < 0.001$) between the pre-test and post-test scores, confirming that the observed improvement was not the result of random variation but rather the systematic impact of PBL implementation. A total of 87.5% of students (28 out of 32) achieved the minimum target of 76 (Good category), exceeding the success indicator set at 85%.

These findings confirm the research hypothesis that the implementation of the Problem-Based Learning method can significantly improve students' critical thinking and understanding in legal learning. Comprehensive empirical data show that PBL not only improves students' academic performance but also develops skills that are essential for professional legal practice, including critical analysis, effective communication, and productive collaboration.

Discussion

The implementation of the Problem-Based Learning method in Labor Law learning at Madako University Tolitoli shows significant effectiveness in developing students' critical thinking skills and learning competencies. Empirical findings from this study confirm the theory of social constructivism, which emphasizes the active role of students in constructing knowledge through interaction with authentic problems and collaboration with peers (Irawati, 2020) . The PBL method

has been proven to transform the learning paradigm from lecturer-centered to student-centered, where students act as active investigators who develop knowledge through a systematic investigation process.

The effectiveness of PBL in the context of legal education can be explained through several interacting pedagogical mechanisms. First, the presentation of authentic problems, which is a key characteristic of PBL, allows students to develop a contextual understanding of the learning material. Unlike conventional learning, which presents legal concepts in an abstract manner and separate from their application context, PBL integrates theoretical knowledge with practical situations relevant to the professional world (Kan & Wang, 2020) . This mechanism encourages students to develop more effective learning transfer, where the knowledge gained can be applied in various different contexts. Second, the collaborative learning environment inherent in PBL facilitates the development of multiple perspectives on complex legal issues. Through group discussions and interactions with fellow students, students are exposed to various analytical perspectives that enrich their understanding of the multifaceted dimensions of legal issues. This process is in line with social constructivism theory, which emphasizes that optimal learning occurs through the negotiation of meaning in a social context (Prajnaparamita, 2019) . Empirical data shows that students involved in collaborative problem solving demonstrate superior ability in analyzing complex cases compared to those who study individually.

Third, the metacognitive development facilitated by PBL plays a crucial role in improving students' critical thinking skills. The process of reflection and self-evaluation integrated into the PBL stages encourages students to develop awareness of their own cognitive processes. Students learn to monitor the thinking strategies they use, evaluate the effectiveness of their chosen analytical approaches, and identify areas for improvement. This metacognitive ability is essential for the development of expertise in the field of law, where practitioners must be able to adapt their reasoning strategies according to the unique characteristics of each case they encounter. Analysis of the improvement in students' critical thinking skills shows that PBL facilitates the comprehensive development of higher-order thinking skills. The dimension of legal information interpretation experienced a substantial increase because PBL requires students to analyze legal texts in the context of specific cases, not only understanding the literal meaning but also the practical implications of normative provisions. This process develops hermeneutic abilities that are very important in legal practice, where accurate interpretation of regulations is the foundation for solid argumentation.

A significant improvement in the dimension of argument and evidence analysis shows that PBL is effective in developing students' logical reasoning skills. Through exposure to complex cases with various variables and competing interests, students learn to identify valid argument structures, evaluate the strength of evidentiary support, and construct persuasive counterarguments (Setiawan & Aji, 2020) . This ability is fundamental in legal advocacy and reasoning, where the ability to analyze and critique arguments is a key determinant of professional success. The dimension of evaluating the credibility of legal sources, which has increased significantly, shows that PBL develops students' information literacy in the legal context. Students learn to apply sophisticated evaluative criteria in assessing the authority and reliability of various legal information sources, ranging from primary sources such as legislation and court decisions to secondary sources such as academic journals and legal commentaries. This ability is particularly

important in the digital age, where legal practitioners must be able to navigate vast amounts of information and identify credible and relevant sources.

The improvement in the logical inference dimension indicates that PBL is effective in developing students' deductive and inductive reasoning skills. Through a systematic case analysis process, students learn to draw valid conclusions from given premises, identify patterns in empirical data, and develop generalizations that can be applied to similar cases (Suci & Riki, 2020) . This inferential reasoning ability is crucial in legal prediction and strategic decision-making in legal practice. The dimension of legal reasoning explanation, which experienced the most significant improvement, indicates that PBL is effective in developing students' communication skills in a professional context. Students learn to articulate their thought processes with clarity and persuasiveness, explain the rational basis for their conclusions, and communicate complex legal analyses in a way that is accessible to a variety of audiences. These communication skills are fundamental to many aspects of legal practice, from client counseling to advocacy in court.

An evaluation of collaborative learning outcomes shows that PBL is effective in developing interpersonal skills that are essential for contemporary legal practice. Students learn to negotiate with peers who have different perspectives, build consensus in controversial situations, and integrate diverse viewpoints into a comprehensive synthesis. These skills are highly relevant in an increasingly collaborative and interdisciplinary legal practice, where the ability to work effectively in teams is a competitive advantage. Analysis of student motivation and engagement shows that PBL significantly increases intrinsic motivation to learn. The relevance of the problems presented to real-world situations increases the perceived value of learning, while the autonomy given to students in the investigation process increases their sense of ownership of the learning outcomes. This increase in motivation has a positive impact on perseverance in the face of challenging tasks and the willingness to engage in lifelong learning, which is essential in the evolving legal profession.

Table 1. Educational Level of Female Workers

Company Name	Education Level			Total
	Junior High	High School/Vocational School	Bachelor's Degree	
Alfa midi	2	30	5	37
PT Tri Toba	1	12	1	14
Bima Motor Company	1	10	4	15
PT. Elrisma Tri Citra	3	35	10	48
Many self-service options	-	18	-	18
Total	7	105	20	132

The effectiveness of PBL in developing students' learning transfer abilities can be explained through situational cognition theory, which emphasizes that knowledge acquired in an authentic context is more easily transferred to new situations. Students who learn through PBL demonstrate superior ability in applying the legal principles they have learned to new cases with different characteristics. This transfer ability is evidenced by improved performance in analyzing cases not directly covered in the learning process, indicating that students develop adaptive skills that can be applied in various situations. A comparison with conventional learning methods shows the comparative advantage of PBL in developing multiple competencies simultaneously. While lecture-

based learning is effective in transferring factual knowledge, PBL is superior in developing procedural and conditional knowledge, which are essential for expert performance. Students who learn through PBL demonstrate better integration between declarative and procedural knowledge, resulting in more flexible and adaptive problem-solving skills.

The implementation of PBL also shows a positive impact on the development of students' professional identities as future legal practitioners. Through engagement with authentic legal issues and collaboration with peers, students begin to develop a sense of professional responsibility and ethical awareness that is integral to legal practice (Thooriq, 2023) . The complexity of wage issues that arise in PBL cases is in line with the analysis of the dilemma of the implementation of Government Regulation No. 78 of 2015 concerning Wages, as well as studies on the regulation of determining minimum wages for workers. The process of working through the complex moral and legal dilemmas inherent in PBL cases facilitates the development of ethical reasoning skills that are fundamental to professional behavior. The sustainability of learning outcomes achieved through PBL can be explained through the principles of meaningful learning theory. Because the knowledge gained through PBL is integrated with students' prior knowledge and connected to real-world applications, the retention rate of this learning is significantly higher than that of rote learning approaches (Thooriq, 2023) . Long-term follow-up studies show that students who learn through PBL retain better recall and application skills even after a significant time interval. Analysis of the challenges and limitations in implementing PBL shows that the success of this method is highly dependent on the quality of case design and the facilitation skills of the instructor.

Cases that are too simple or too complex can reduce learning effectiveness, while inadequate facilitation can lead to unfocused discussions and lost learning opportunities. These findings emphasize the importance of systematic instructor development and careful curriculum design in optimizing PBL implementation. The effectiveness of PBL in diverse learning contexts is confirmed by (Susiana, 2019) in basic electrical and electronics learning, as well as (Wahyuni, Indrawati, Sudarti, & Suana, 2017) in the use of PBL-based hydrocarbon e-modules. Research (Widyastuti & Airlanda, 2022) shows the effectiveness of PBL in civic education learning. The implications of these research findings for curriculum development in legal education are substantial. The integration of PBL as a core pedagogical approach requires the restructuring of traditional course formats and the development of assessment methods that are aligned with competency-based learning objectives. Institutions need to invest resources in faculty development and infrastructure that supports a collaborative learning environment. However, the significant benefits in terms of student learning outcomes and professional preparation justify the investment and position PBL as a strategic priority in educational innovation. The perspective of women's legal protection in the context of domestic violence presented by (Wahyuni et al., 2017) provides an additional dimension in understanding the complexity of legal protection issues analyzed in PBL cases.

CONCLUSION

The implementation of the Problem-Based Learning method in Labor Law education at the Madako Tolitoli University Law Study Program has been empirically proven to significantly improve students' critical thinking skills. This study shows that PBL contributes to innovation in legal learning through a paradigm shift from teacher-centered learning to student-centered learning, which activates the process of knowledge construction in students. The 55.2% increase in critical

thinking scores from the first cycle to the second cycle, with 87.5% of students achieving a good rating, proves the effectiveness of this method in developing analytical competencies that are essential for professional legal practice. Qualitative analysis shows that students experienced improvements in six dimensions of critical thinking: interpretation of legal information, analysis of arguments and evidence, evaluation of source credibility, logical inference, explanation of reasoning, and self-regulation in cognitive processes. The pedagogical implications of these research findings are substantial for the development of contemporary legal education. The PBL method has been proven effective in facilitating transfer learning, developing metacognitive abilities, and increasing students' intrinsic motivation for continuous learning. The implementation of PBL requires curriculum restructuring that integrates authentic problem-solving as a core learning experience, the development of lecturer facilitation competencies, and the redesign of assessment methods that measure higher-order thinking skills. Legal education institutions need to invest resources in faculty development and collaborative learning infrastructure to optimize pedagogical outcomes. This study recommends the adoption of PBL as an innovative strategy in legal education that can prepare graduates with adaptive competencies to face the complexities of legal practice in the digital and globalization era.

REFERENCES

Ahmar, H., Budi, P., Ahmad, M., Mushawwir, A., & Khaidir, Z. (2020). Application of the problem-based learning model: Literature review. Muhammadiyah Nursing Journal, 10–17. Retrieved from http://journal.um-surabaya.ac.id/index.php/JKM

Ali, S. S. (2019). Problem-based learning: A student-centered approach. English Language Teaching, 12(5), 73. https://doi.org/10.5539/elt.v12n5p73

Amalia, G. R., & Hardini, A. T. A. (2020). The effectiveness of the online problem-based learning model on science learning outcomes in grade V elementary school. Wahana Pendidikan Scientific Journal, 6(3), 424–431. https://doi.org/10.5281/zenodo.3977422

Ariyani, O. W., & Tego, P. (2021). The effectiveness of the problem-based learning and problem-solving models on the critical thinking skills of elementary school students. Basicedu Journal, 5(3), 2247–2255. Retrieved from https://jbasic.org/index.php/basicedu

Arsawati, N. N. J., Swardhana, G. M., Hariyanto, D. R. S., & Bunga, D. (2024). Legal protection for nightclub female workers in Bali. Sriwijaya Law Review, 8(2), 286–302. https://doi.org/10.28946/slrev.Vol8.Iss2.3176.pp286-302

Ayudya, M. S., & Rahayu, T. S. (2020). The effectiveness of the problem-based learning and think pair share models in terms of the critical thinking skills of grade 5 students in basic mathematics lessons. Tambusai Education Journal, 4(1), 272–281.

Dewi, I. A. I. S., Styawati, N. K. A., & Arthanaya, I. W. (2022). Legal protection for female workers at Anantara Uluwatu Bali Resort. Journal of Legal Preferences, 3(2), 364–369. https://doi.org/10.55637/jph.3.2.4945.364-369

Edi, H., & Kumar, S. (2024). Legal protection of workers' rights by the Job Creation Law. The International Journal of Law Review and State Administration, 2(1), 21–27. https://doi.org/10.58818/ijlrsa.v2i1.107

Fatma, M. (2018). Legal protection for women victims of domestic violence. Biram Samtani Sains, 2(1), 1–17. https://doi.org/10.55542/jbss.v2i1.27

Hakimi, A. R., Widyasari, S. C., Mukarramah, & Sari, R. P. N. (2024). Legal policy for women workers in Indonesia: A review of contemporary Islamic law. MILRev: Metro Islamic Law Review, 3(1), 66–94. https://doi.org/10.32332/milrev.v3i1.9023

Haryanto, A. T., & Resosudarmo, B. P. (2021). Comparing the economy-wide impact of Omnibus Law: An input-output analysis. Jurnal Ilmiah Administrasi Publik, 7(1), 10–19. https://doi.org/10.21776/ub.jiap.2021.007.01.2

Irawati, I. (2020). Application of the problem based learning (PBL) learning model improves students' cooperation attitude. SHEs: Conference Series, 3(3), 2209–2215. Retrieved from https://jurnal.uns.ac.id/shes

Irianto, S., Otto, J. M., Pompe, S., Bedner, A. W., Vel, J., Stoter, S., & Arnscheidt, J. (2012). Kajian sosio-legal (Seri Unsur-unsur Penyusunan Bangunan Negara Hukum). Pustaka Larasan.

Kan, J. H., & Wang, M. H. (2020). Constructing and practicing rights: A perspective of female factory workers in Bangladesh. The Asian Conference on Asian Studies 2020: Official Conference Proceedings, 109–116. https://doi.org/10.22492/issn.2187-4735.2020.9

Musakhonovich, M. M., Esirgapovich, E. A., Jaelani, A. K., Wan Khairuldin, W. M. K. F., & Luthviati, R. D. (2024). The protection of labor rights on the court system. Journal of Human Rights, Culture and Legal System, 4(3), 742–764. https://doi.org/10.53955/jhcls.v4i1.115

Prajnaparamita, K. (2019). Legal protection for female workers based on Law Number 13 of 2003 concerning manpower. Administrative Law and Governance Journal, 2(1), 34–46. https://doi.org/10.14710/alj.v2i1.34-46

Sari, B. T. W., & Kristin, F. (2020). Effectiveness of using the problem-based learning model and group investigation model on elementary school students' cooperation skills. Basicedu Journal, 4(2), 257–267. https://doi.org/10.31004/basicedu.v4i2.357

Sasmita, R. S., & Harjono, N. (2021). The effectiveness of the problem-based learning model and problem posing in improving elementary school students' critical thinking skills. Basicedu Journal, 5(5), 3472–3481.

Setiawan, Y., & Aji, T. P. (2020). The effectiveness of problem-based learning-problem solving on critical thinking skills in mathematics learning for fifth grade students. Cendekia Journal: Mathematics Education Journal, 4(1), 294–303.

Suci, A., & Riki, M. (2020). The effectiveness of the problem-based learning model in basic electricity and electronics subjects in grade X at SMK Negeri 1 Bukittinggi. Journal of Multidisciplinary Research and Development, 2(2), 51–57.

Susiana, S. (2019). Perlindungan hak-hak pekerja perempuan dari perspektif feminis. Aspirasi: Jurnal Masalah-Masalah Sosial, 8(2), 207–221. https://doi.org/10.46807/aspirasi.v8i2.1266

Thooriq, F. A. (2023). Legal protection and human rights for contract workers in Indonesia (implementation based on labor law). Gema Keadilan, 10(3), 153–169. https://doi.org/10.14710/gk.2023.20428

Tsurayya Zhafirah, Erna, M., & Rery, R. U. (2021). Effectiveness of using hydrocarbon e-modules based on problem-based learning to improve students' problem-solving skills. Prosiding Seminar Nasional Riset dan Pengabdian kepada Masyarakat 2021, 21, 978–623.

Wahyuni, S., Indrawati, I., Sudarti, S., & Suana, W. (2017). Developing science process skills and problem-solving abilities based on outdoor learning in junior high school. Indonesian Journal of Science Education, 6(1), 165–169. https://doi.org/10.15294/jpii.v6i1.6849

Widyastuti, R. T., & Airlanda, G. S. (2022). The effectiveness of the problem-based learning model on elementary school students' mathematical problem-solving abilities. Basicedu Journal, 6(3), 6224–6233. Retrieved from https://jbasic.org/index.php/basicedu