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THE ROLE OF PROBLEM-BASED LEARNING IN DEVELOPING ANALYTICAL AND CRITICAL THINKING IN SOCIAL SCIENCES EDUCATION

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Abstract: This article examines methods for teaching students how to solve social problems through the use of problem-based learning (PBL) technologies. It analyzes various strategies such as creating problem situations, discussions, analytical tasks, debates, brainstorming, and case-study methods, which enhance students' independent thinking, ability to identify cause-and-effect relationships, and capacity to make effective decisions regarding social issues. The study also highlights the role of PBL in developing social reasoning, critical thinking, and creative problem-solving skills.
Keywords: Problem-based learning, social issues, teaching methods, case-study, critical thinking, discussion techniques, creative approach, educational technologies.

In the modern education system, it has become increasingly important to develop students' ability to think independently, apply analytical reasoning, and make effective decisions in complex social situations. In the context of globalization of social processes, the intensification of information flows, and the acceleration of societal changes, the task of teaching the younger generation not only ready-made knowledge, but also the ability to analyze real-life situations, generate alternative solutions, and make socially responsible decisions has become essential. Problem-based learning (PBL) technology emerged precisely from this need. It aims to activate students' cognitive processes, develop independent inquiry skills, and cultivate competencies for solving real social problems. Within this approach, learners are confronted with a problematic situation, which they must analyze, evaluate from multiple perspectives, compare various viewpoints, and propose their own solution. Such a methodology aligns well with the content and methodology of the social sciences and humanities, which study human beings, society, culture, social relations, and their complex mechanisms [1].

Teaching based on problem-based learning not only imparts knowledge but also develops inherently human cognitive processes—such as the ability to ask questions, analyze, evaluate, justify, and approach problems creatively. This process fully corresponds with the "competency-based approach," which occupies a central position in modern educational philosophy. Therefore, integrating PBL with methods aimed at solving social issues significantly increases the effectiveness of instruction.

In today's world, the diversity of social problems—demographic shifts, information threats, environmental challenges, cultural transformations, youth issues, and social inequality—requires students to possess a well-developed social consciousness, responsibility, and critical thinking skills [2]. Problem-based learning is regarded as one of the most effective ways to develop such competencies.

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Problem-based learning (PBL) is one of the most effective approaches in modern pedagogy and plays a special role in forming skills for addressing social issues. Its essence lies in the student's active participation in the cognitive process, encountering real-life problems, and striving to solve them through scientific reasoning. A review of the literature shows that PBL is among the best methods for deep comprehension of social sciences, the development of analytical thinking, and the enhancement of independent decision-making skills.

As an innovative pedagogical methodology, PBL fosters competencies in social problem-solving. According to L. Vygotsky's theory of the "zone of proximal development," when students confront complex challenges, their intellectual capacity becomes highly activated. PBL engages exactly this "activated intellectual zone" [3], ensuring deeper cognitive engagement and more robust problem-solving performance.

In Karl Popper's philosophical views, the development of any form of knowledge occurs through the formulation of problems and their critical testing. Problem-based learning fully corresponds to Popper's model of *"knowledge as a response to a problem"* [4].

Another modern researcher, N. Selwyn, emphasizes that integrating problem-based approaches with digital pedagogy significantly strengthens students' analytical culture [5]. According to him, modeling problem situations through digital simulations, interactive projects, or virtual social processes makes the learning experience more dynamic and engaging.

In local research, S. Mavlonov highlights the psychological significance of problem-based learning methods, stating that *"when a student encounters a problematic situation, both emotional and cognitive capacities are activated simultaneously, creating a truly creative learning experience"* [6].

Similarly, S. Mamarajabov identifies the main strengths of problem-based learning in social sciences as the enhancement of independent thinking, the development of communication culture, and the deep understanding of the essence of social issues [7].

M. Qodirova stresses that problem-based learning plays a crucial role in shaping social consciousness among youth, teaching them to make fast and reasonable decisions in uncertain situations [8].

Problem-based learning is considered one of the most effective pedagogical approaches for promoting independent thinking, analytical reasoning, and active engagement in social processes. Research results show that teaching social issues through problem-based learning not only increases the effectiveness of knowledge acquisition but also develops competencies such as problem formulation, situational analysis, identification of alternative solutions, argumentation, and evidence-based decision-making.

One of the most important aspects of effectively implementing problem-based learning is that the educator must clearly understand not only its instructional but also its educational (formative) functions. In the problem-based learning process, the teacher does not act as a source providing ready-made answers; instead, the teacher serves as a facilitator who stimulates independent thinking, intellectual development, and cognitive activity. The teacher's task is to guide learners toward inquiry, questioning, and conscious processing of available information. The essence of problem-based learning is to lead students to knowledge through intellectual challenges, help them understand the nature of the problem, draw conclusions based on factual evidence, and develop independent decision-making skills. Therefore, the educator must create problem situations that reflect real-life contexts rather than artificial ones and manage them in accordance with didactic objectives.

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This educational technology can be effectively applied at all stages of the learning process—introducing new material, consolidating knowledge, analyzing information, generalizing concepts, and evaluating learning outcomes. Problem situations play a key role in developing students' logical thinking, enhancing creativity, improving communication skills, and increasing motivation.

Based on the studied sources and practical experience, problem-based learning has the following scientific and pedagogical advantages:

1. Activates thinking. Students do not simply receive ready-made information; instead, they independently identify the essence of the problem and seek causal relationships.
2. Develops social thinking. Working with real social situations, conflicts, and issues expands social awareness.
3. Strengthens problem-solving competence. Students learn to think through the chain: *"identify the problem – analyze – create solutions – evaluate."*
4. Enhances creativity. The possibility of approaching the same problem from different perspectives stimulates creative thinking.
5. Fosters collaboration. Solving problem situations in groups promotes communication, leadership, and social responsibility.

Accordingly, problem-based learning effectively fulfills several strategic tasks in social sciences, such as:

• developing students' ability to systematically analyze social phenomena;
• strengthening the application of scientific approaches to solving social problems;
• developing competencies required by modern society (critical thinking, problem solving, communication);
• increasing students' social responsibility and civic engagement.

Overall, teaching social problem-solving based on problem-based learning is an innovative pedagogical approach that enhances educational quality, strengthens students' social competencies, and fosters analytical thinking and active citizenship necessary for societal development. Deep integration of this technology in the future will contribute to the modernization of the educational process, the transformation of youth into active participants in social processes, and the formation of human capital essential for sustainable development.

Based on the above considerations, the following recommendations can be made:

• Systematically incorporate problem situations into the pedagogical process by creating a database of problem scenarios for each social science subject.
• Enhance students' analytical and decision-making skills through methods such as "analytical maps," "problem trees," and "solution matrices," guiding learners to justify, argue, and evaluate decisions using multi-factor analysis.
• Support problem-based learning with artificial intelligence (AI) by using interactive AI tools (ChatGPT, Claude, Bard, etc.) to generate problem situations.
• Organize educational projects linked to real social life by involving students in community-based initiatives in collaboration with local communities, NGOs, and public organizations.
• Introduce service-learning methodologies aimed at solving practical social problems through real social engagement.
• Strengthen group and collaborative work by assigning students different social roles within problem-solving tasks (problem identifiers, solution developers, risk evaluators, monitoring teams).

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• Use social experiments—mini research projects, surveys, observations, and interviews—to deepen students' understanding of social problems.
• Require students to perform key stages of critical thinking during problem-solving, such as analyzing evidence, distinguishing fact from opinion, generating alternative solutions, and assessing the social consequences of decisions.

The conducted analysis demonstrates that problem-based learning (PBL) is one of the most effective pedagogical technologies for developing students' ability to solve social issues, fostering critical and analytical thinking, and strengthening their active participation in contemporary societal processes. Within the framework of social sciences, PBL creates a learning environment in which students encounter real or realistically modeled problem situations, analyze them through scientific reasoning, generate alternative solutions, and make evidence-based decisions. Such a learning model ensures the formation of higher-order thinking skills that are essential for navigating the complexities of modern social life.

The study confirms that the philosophical and pedagogical foundations of PBL—reflected in the ideas of K. Popper, L. Vygotsky, J. Dewey, D. Kolb, and other classical and contemporary scholars—align with the demands of today's competency-based education. PBL activates students' cognitive, emotional, and motivational spheres simultaneously, thereby enhancing the quality and depth of learning. Local research also supports the view that problem-based learning significantly contributes to the development of independent thinking, communication culture, and socially responsible behavior among students.

Furthermore, the integration of PBL with digital tools and artificial intelligence expands its methodological potential, making the learning process more interactive, data-driven, and practice-oriented. Digital simulations, virtual social scenarios, and AI-assisted analytical tools enrich the pedagogical experience and provide students with innovative means of engaging with complex social issues.

Overall, the findings indicate that problem-based learning is not merely an instructional technique but a comprehensive pedagogical strategy that equips students with essential social competencies—critical thinking, collaborative problem-solving, decision-making, creativity, and civic responsibility. Effective implementation of PBL contributes to the development of active, thoughtful, and socially engaged individuals who can meaningfully participate in societal transformation and contribute to sustainable development.

Thus, the further integration of problem-based learning into educational practice is a strategic necessity for modernizing the education system and preparing a generation capable of addressing the multidimensional challenges of contemporary society.

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