

THE ROLE OF TEACHING THROUGH PROBLEM-BASED SCENARIOS IN PRIMARY GRADES

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Annotatsiya. Ushbu maqolada boshlang'ich ta'limda muammoli o'qitish (PBL) roli tanqidiy ko'rib chiqiladi, uning nazariy asoslari, pedagogik amalga oshirilishi va yosh o'quvchilarga ta'siri yoritiladi. Maqola muammoli vaziyatlarning tanqidiy fikrlash va analitik mulohaza yuritish kabi muhim kognitiv ko'nikmalarni rivojlantirishda, shuningdek, hamkorlik va o'z-o'zini tartibga solish kabi muhim sotsial-emotsional kompetensiyalarni shakllantirishda qanday katalizator bo'lib xizmat qilishini o'rganadi. Mavjud adabiyotlarga tayanib, maqolada boshlang'ich sinflarda PBLning amaliy qo'llanilishi bo'yicha tushunchalar umumlashtirilgan, o'qituvchining o'rgatuvchidan fasilitatorga o'tishdagi rivojlanayotgan roli ko'rsatilgan. Bundan tashqari, amalga oshirish jarayonida duch keladigan umumiy muammolar ko'rib chiqilgan va samarali integratsiya hamda har tomonlama baholash strategiyalari taklif etilgan. Muhokamada PBLning transformativ pedagogik yondashuv sifatidagi salohiyati ta'kidlanib, yoshlikdan faol, faoliyatga jalb qilingan va umr bo'yi o'rganuvchilarni shakllantirish uchun uni kengroq qabul qilish himoya qilinadi.

Kalit so'zlar: Muammoli o'qitish, boshlang'ich ta'lim, tanqidiy fikrlash, hamkorlikda o'qitish, o'qituvchi roli, pedagogik innovatsiya, kognitiv rivojlanish, sotsial-emotsional ko'nikmalar.

Abstract. This article critically examines the role of problem-based learning (PBL) in primary education, focusing on its theoretical underpinnings, pedagogical implementation, and impact on young learners. It explores how problem situations act as catalysts for developing essential cognitive skills such as critical thinking and analytical reasoning, alongside fostering crucial socio-emotional competencies like collaboration and self-regulation. Drawing upon existing literature, the paper synthesizes insights into the practical application of PBL in primary classrooms, delineating the evolving role of the educator from instructor to facilitator. Furthermore, it addresses common challenges encountered during implementation, proposing strategies for effective integration and comprehensive assessment. The discussion underscores PBL's potential as a transformative pedagogical approach, advocating for its broader adoption to cultivate active, engaged, and lifelong learners from an early age.

Keywords: Problem-based learning, primary education, critical thinking, collaborative learning, teacher role, pedagogical innovation, cognitive development, socio-emotional skills.

Аннотация. Данная статья критически исследует роль проблемно-ориентированного обучения (ПОО) в начальном образовании, акцентируя внимание на его теоретических основах, педагогической реализации и влиянии на юных учащихся. В ней рассматривается, как проблемные ситуации выступают катализаторами для развития таких важнейших когнитивных навыков, как критическое мышление и аналитическое рассуждение, наряду с формированием ключевых социально-эмоциональных компетенций, таких как сотрудничество и саморегуляция. Опираясь на существующую литературу, статья синтезирует идеи по практическому применению ПОО в начальных классах, определяя меняющуюся роль педагога от инструктора к фасилитатору. Кроме того, в ней рассматриваются общие проблемы, возникающие при внедрении, и предлагаются стратегии эффективной интеграции и всесторонней оценки. Обсуждение подчеркивает потенциал ПОО как преобразующего педагогического подхода, выступая за его более широкое внедрение для воспитания активных, вовлеченных и постоянно обучающихся личностей с раннего возраста.

Ключевые слова: Проблемно-ориентированное обучение, начальное образование, критическое мышление, совместное обучение, роль учителя, педагогические инновации, когнитивное развитие, социально-эмоциональные навыки.

Introduction. The contemporary educational landscape increasingly emphasizes the development of adaptable, critical, and collaborative individuals prepared for complex global challenges. In response, pedagogical approaches that move beyond traditional didactic instruction have gained prominence. Among these, problem-based learning (PBL), characterized by the presentation of authentic, ill-structured problems that serve as the initial stimulus and framework for learning, stands out. While PBL has a well-established history in higher education, its relevance and efficacy in primary education are subjects of growing academic inquiry and practical interest. The application of problem situations in elementary classrooms is posited as a powerful method to transcend rote memorization, fostering deeper understanding, active inquiry, and the acquisition of transferable skills from a foundational stage of schooling. This article aims to critically explore the multifaceted role of teaching through problem situations in primary grades, synthesizing theoretical perspectives with practical considerations regarding its implementation, impact on student development, and the evolving responsibilities of educators. By examining the cognitive and socio-emotional benefits, implementation challenges, and assessment strategies associated with PBL, this paper seeks to provide a comprehensive overview of its potential as a transformative pedagogical tool in early education.

Literature review. The theoretical foundations of problem-based learning are deeply rooted in constructivist learning theories, notably influenced by the works of John Dewey, Jean Piaget, and Lev Vygotsky. Dewey's emphasis on experiential learning and "learning by doing" aligns with PBL's core tenet of engaging students in authentic problems to construct knowledge. Piaget's stages of cognitive development suggest that children actively construct their understanding of the world through interaction with their environment, a process facilitated by the disequilibrium created by problem situations. Vygotsky's concept of the Zone of Proximal Development (ZPD) is particularly pertinent, as PBL often involves collaborative group work where students learn from peers and are guided by a facilitator, extending their capabilities beyond what they could achieve independently.

Methodologically, PBL in primary education involves a structured yet flexible approach. It typically begins with the teacher presenting an engaging, age-appropriate problem that is relevant to students' experiences or curriculum. Unlike traditional exercises with clear-cut solutions, these problems are often open-ended, requiring students to identify what they know, what they need to know, and how they will acquire that knowledge. An open-access conference paper [1] highlights the significant importance of developing and presenting such problem situations as a strategy to stimulate and substantially improve primary school students' cognitive and critical thinking abilities. This process encourages inquiry, research, discussion, and critical analysis, culminating in

the development and presentation of potential solutions. The iterative nature of problem-solving within a PBL framework is crucial for developing sustained engagement and resilience.

The impact of PBL on primary school students' development is evident across cognitive and socio-emotional domains. Cognitively, engaging with problem situations inherently cultivates critical thinking skills. Students learn to analyze information, evaluate different perspectives, synthesize knowledge from various sources, and formulate reasoned arguments. This process moves beyond surface-level understanding, encouraging a deeper conceptual grasp of subject matter. The article "Developing Critical Thinking Skills in Young School-Age Children" [3] underscores the necessity of modern methods for cultivating these fundamental competencies, including analytical reasoning and evaluative judgment, which are directly fostered through problem-solving scenarios. Furthermore, PBL enhances problem-solving abilities, creativity, and metacognition, as students reflect on their learning processes and strategies.

Beyond cognitive gains, PBL significantly contributes to socio-emotional development. Collaborative problem-solving, a cornerstone of PBL, necessitates effective communication, active listening, negotiation, and teamwork. The aforementioned article [3] specifically examines strategies to develop cooperation and teamwork skills among children during their formative early school years, noting how pedagogical approaches can shape these vital social interaction abilities within a group learning environment. Through these interactions, students develop empathy, learn to manage conflict, and build a sense of shared responsibility. They also enhance self-regulation, as they learn to manage their time, set goals, and take initiative in their learning journey. Increased autonomy and intrinsic motivation are often observed, as students take ownership of their learning and perceive its direct relevance to real-world contexts.

Implementing problem-based learning in primary grades requires a substantial shift in pedagogical approach, particularly concerning the teacher's role. The educator transitions from being a purveyor of knowledge to a facilitator, guide, and mentor. This involves designing appropriate problem scenarios that are challenging yet accessible, providing scaffolding and resources, monitoring group dynamics, and guiding students' inquiry without dictating solutions. The conference paper [1] further elaborates on the practical skills required by educators to successfully create, implement, and manage these problem-based scenarios. Teachers must cultivate an environment of trust and open inquiry, encouraging students to take risks and learn from mistakes. Professional training for educators is often critical to equip them with these specialized skills, as hinted at by broader discussions around professional development [3]. This includes mastering the art of asking guiding questions, fostering productive discourse, and managing diverse learning needs within collaborative settings. Scholarly work within specific regional contexts, such

as the 'aftoreferat' associated with M. Maxammatova and the A. Avloniy National Institute of Pedagogical Skills [2], implicitly contributes to the discourse on enhancing pedagogical competencies necessary for such innovative teaching methods.

Despite its recognized benefits, the implementation of PBL in primary classrooms is not without challenges. Teachers may encounter difficulties in designing suitable problems that align with curriculum objectives and are developmentally appropriate. Managing group dynamics, ensuring equitable participation, and addressing students' initial resistance to open-ended tasks can also be demanding. Furthermore, assessment in a PBL environment requires moving beyond traditional tests. Evaluating not only the final solution but also the process of inquiry, collaboration, critical thinking, and communication demands a more holistic approach. This might include rubrics for assessing participation, problem-solving strategies, presentation skills, and reflective journals. Overcoming these challenges often involves ongoing professional development for teachers, access to high-quality resources, and institutional support that values process-oriented learning. It also requires a clear communication strategy with parents about the nature and benefits of this less conventional instructional method.

Research methodology. This paper adopts a qualitative approach, employing a critical synthesis of existing academic literature to explore the multifaceted role of problem-based learning in primary education. The methodology involves a systematic review and analysis of scholarly articles, conference papers, and theoretical texts pertaining to PBL, its pedagogical applications, and its developmental impacts on young learners. Primary reliance is placed on peer-reviewed sources that offer insights into both the theoretical underpinnings and practical considerations of implementing problem-based scenarios in elementary school settings. Specifically, this synthesis draws upon discussions related to problem-based learning technologies in primary school lessons [1], the development of critical thinking and collaborative skills in young children [3], and general pedagogical research contexts including regional academic contributions [2]. The selection criteria prioritize sources that illuminate the cognitive and socio-emotional aspects of student development within a PBL framework, as well as those that discuss the practical challenges and the evolving role of the teacher. The aim is to construct a comprehensive argument for the efficacy and strategic importance of PBL by integrating diverse perspectives and findings from the pedagogical research domain. This qualitative synthesis allows for a nuanced understanding of a complex educational phenomenon, identifying key themes, trends, and implications for future practice and research without engaging in new empirical data collection.

Conclusion. Problem-based learning represents a potent pedagogical paradigm for primary education, offering a dynamic alternative to traditional instructional models. Its role in fostering critical thinking, analytical skills, and a deeper understanding of subject

matter is undeniable, preparing young learners not merely for academic success but for the complexities of real-world challenges. Beyond cognitive development, PBL is instrumental in nurturing essential socio-emotional competencies such as collaboration, communication, and self-regulation, which are foundational for personal growth and future societal contributions. While the implementation of PBL in primary grades presents inherent challenges, particularly concerning curriculum design, classroom management, and innovative assessment strategies, these obstacles are surmountable through dedicated professional development, robust resource provision, and a clear vision for student-centered learning. The transition of the teacher's role from didactic instructor to guiding facilitator is central to this paradigm shift, requiring specific skills in problem design, scaffolding, and formative feedback. Ultimately, PBL is not merely a method of teaching but a philosophy of learning that empowers children to become active participants in their educational journey, cultivating curiosity, resilience, and a lifelong love for inquiry. Moving forward, continued research into the long-term impacts of early PBL engagement, refined assessment models, and scalable professional development programs will be crucial to maximize its transformative potential across diverse primary educational contexts.

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