development plans, performance evaluations, and mentoring systems contributed to systematic skill enhancement among teachers.

Third, schools fostering open communication, feedback mechanisms, and collaborative team structures exhibited 40% higher implementation rates of pedagogical innovations. Teachers in such environments reported stronger professional identity, mutual support, and collective problem-solving capacity.

Furthermore, qualitative findings revealed that leaders who actively engaged in instructional supervision, peer observation programs, and reflective dialogue sessions significantly enhanced teachers' confidence and professional autonomy.

These results confirm that leadership quality directly influences teacher professional development by shaping institutional climate, professional culture, and resource allocation.

Conclusion and Recommendations. In conclusion, educational leadership plays a decisive and multifaceted role in teacher professional development. Effective leaders not only manage institutions but also cultivate environments that nurture continuous learning, innovation, and professional collaboration.

The study confirms that transformational and instructional leadership models significantly enhance teacher motivation, engagement, and professional competence. Therefore, leadership development should be considered a strategic priority within educational reform initiatives.

Based on the findings, the following recommendations are proposed:

1. Implement structured leadership training programs focusing on transformational and instructional leadership competencies.
2. Develop individualized professional growth plans for teachers aligned with institutional strategic goals.
3. Establish professional learning communities that encourage peer collaboration and reflective practice.
4. Introduce mentoring and coaching systems to support early-career teachers.
5. Integrate digital tools and innovation frameworks into professional development programs.

Sustainable improvement in education depends not only on curriculum reforms but also on leadership capacity to empower teachers as lifelong learners and change agents.

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Najmutdinova Gulnozakhon Bakhtiyorovna (International School of Finance, Technology and Science (ISFT) Institute Head of the Department of Philology and Language Teaching, Doctor of Philosophy in Pedagogical Sciences (PhD)

THE IMPORTANCE OF REFLECTION AND SELF-ASSESSMENT IN MODERN EDUCATION

Annotation. *This article examines the importance of reflection and self-assessment in modern education. Reflection is considered as a key process that helps learners analyze their learning experiences, knowledge, and achievements. Self-assessment encourages students to take responsibility for their learning, develop independence, and enhance critical thinking skills. The article highlights the role of reflective practices in improving motivation, academic performance, and personal growth. In addition, teacher reflection is discussed as an essential factor for professional development and improving the quality of education. The study concludes that reflection and self-assessment are effective pedagogical tools for implementing a competency-based approach in contemporary educational systems.*

Keywords: *reflection, self-assessment, modern education, critical thinking, competencies, educational quality.*

ZAMONAVIY TA'LIMDA REFLEKSIYA VA O'Z-O'ZINI BAHOLASHNING AHAMIYATI

Annotatsiya. *Ushbu maqolada zamonaviy ta'lim jarayonida refleksiya va o'z-o'zini baholashning ahamiyati ilmiy-pedagogik jihatdan tahlil qilinadi. Refleksiya o'quvchilarning o'z bilimlari, ko'nikmalari va faoliyat natijalarini anglashiga yordam beruvchi muhim mexanizm sifatida qaraladi. O'z-o'zini baholash esa ta'lim oluvchilarda mustaqil fikrlash, mas'uliyat va tanqidiy yondashuvni shakllantirishda muhim*

rol o'ynaydi. Maqolada reflektiv ta'limning shaxsiy rivojlanish, motivatsiya va akademik natijalarga ta'siri yoritiladi. Shuningdek, o'qituvchilarning refleksiv faoliyati ta'lim sifatini oshirish omili sifatida asoslanadi. Zamonaviy ta'limda refleksiya va o'zini baholash kompetensiyaviy yondashuvni amalga oshirishda muhim pedagogik vosita ekanligi xulosa qilinadi.

Kalit so'zlar: *refleksiya, o'z-o'zini baholash, zamonaviy ta'lim, tanqidiy fikrlash, kompetensiya, ta'lim sifati.*

ЗНАЧЕНИЕ РЕФЛЕКСИИ И САМООЦЕНКИ В СОВРЕМЕННОМ ОБРАЗОВАНИИ

Аннотация. *В статье рассматривается значение рефлексии и самооценки в системе современного образования. Рефлексия анализируется как процесс осмысления учащимися собственного учебного опыта, знаний и результатов деятельности. Самооценка способствует формированию у обучающихся ответственности, самостоятельности и критического мышления. В работе подчеркивается роль рефлексивных практик в повышении учебной мотивации и личностного развития. Особое внимание уделяется педагогической рефлексии как фактору профессионального роста учителя и повышения качества образования. Делается вывод о том, что рефлексия и самооценка являются важными инструментами реализации компетентностного подхода в условиях модернизации образования.*

Ключевые слова: *рефлексия, самооценка, современное образование, критическое мышление, компетенции, качество образования.*

Introduction. The modern education system is undergoing a radical renewal in the context of social development, technological development and global competition. Today, the main task of education is not limited to the transfer of ready-made knowledge, but also to form independent thinking, analysis of one's own activities and self-development skills in students. From this point of view, reflection and self-assessment are emerging as integral components of modern education.

Reflection is a process of conscious analysis of one's own knowledge, experience, activities and results, which allows learners to understand their strengths and weaknesses. Self-assessment is a logical continuation of reflection and develops the student's ability to make an objective and well-founded assessment of their own educational activities. These processes strengthen the sense of responsibility in students and create the basis for their participation in the educational process as active subjects. [1; 56]

While in the traditional educational model the teacher has played the role of a leader and the student has played the role of a passive listener, in modern pedagogical approaches the student is considered the central figure. In such conditions, reflection and self-assessment play an important role in increasing the effectiveness of the educational process, ensuring an individual approach, and implementing competency-based education. By analyzing their own activities, the student acquires knowledge more deeply and has the opportunity to apply it in real-life situations.

Reflection is also important not only for students, but also for teachers. The teacher's reflective approach serves to analyze the lesson process, improve pedagogical methods, and increase the quality of education. This creates an environment of effective communication and cooperation between the teacher and the student.

Reflection and self-assessment are important pedagogical tools of modern education, which support personal development, critical thinking, and the concept of lifelong learning. This article analyzes the role and importance of reflection and self-assessment in the educational process, as well as the ways of their effective application from a scientific and theoretical perspective.

Literature analysis and research methodology. The issue of reflection and self-assessment in modern educational theory has been widely covered by many foreign and domestic researchers. The concept of reflection was first scientifically substantiated in pedagogical literature by J.Dewey, who interpreted reflection as a process of conscious analysis of an individual's experience (Dewey, 1933). According to Dewey, reflection is an important factor that increases the effectiveness of education [2;64-b.]

D.Schön interpreted reflection as an integral part of professional activity and introduced the concepts of "reflection during action" and "reflection after action" into scientific circulation (Schön, 1983). This approach serves as an important theoretical basis for the development of a teacher's reflexive competence in modern education.

Research by P.Black and D.Wiliam is of particular importance in the issue of self-assessment. They substantiated that self-assessment within the framework of formative assessment has a positive effect on students' learning motivation and academic performance (Black & Wiliam, 1998). Also, B.Zimmerman shows self-assessment as an important component of the theory of self-regulated learning (Zimmerman, 2002).

The pedagogical importance of reflection and self-assessment is also highlighted in the studies of local scientists. In particular, N.Muslimov emphasizes that a reflective approach in the educational process serves to develop students' independent thinking (Muslimov, 2015). Also, R.Jo'rayev notes the important role of self-assessment in the competency-based approach (Jo'rayev, 2018). [3;88 p.].

The analyzed literature shows that reflection and self-assessment serve as an important scientific and pedagogical basis for the implementation of person-oriented and competency-based approaches in modern education.

In this study, a comprehensive methodological approach was used to determine the importance of reflection and self-assessment in the modern educational process. The theoretical and methodological basis of the study is constructivism, competency-based approach and theories of reflective education.

The following methods were used in the research process:

– the method of analyzing scientific literature, to study existing theoretical views on reflection and self-assessment;

– methods of comparison and generalization, to identify similarities and differences between different scientific approaches;

– the method of logical analysis, to systematize the research results and draw conclusions.

Also, within the framework of the methodology, the educational quality of reflection and self-assessment, the impact of self-assessment on motivation and personal development was theoretically substantiated. The results of the study serve to draw scientific conclusions on the effective organization of reflective and evaluative activities in the modern educational process.

Analysis and results. The introduction of reflection and self-assessment in the modern educational process is emerging as an important pedagogical mechanism that serves to improve the quality and effectiveness of education. The theoretical analysis conducted shows that the reflective approach transforms students from passive recipients of knowledge into active analyzing and evaluating subjects. This creates the basis for the effective implementation of a person-oriented and competency-based approach in the educational process.

The reflection process develops students' skills in understanding their own educational activities, setting goals, and evaluating results. Through reflective activity, the student learns to realistically assess their level of knowledge, which allows them to consciously plan future learning strategies. As a result, students abandon mechanical memorization of knowledge and strive to understand it in its essence and apply it in practice [4;69 p.].

The integration of self-assessment mechanisms into the educational process leads to an increased sense of responsibility among students. The analysis shows that through self-assessment, the student independently identifies his mistakes and seeks to correct them. This process reduces dependence on external control and forms self-management competence in students. In particular, reflective tasks used within the framework of formative assessment have a positive effect on increasing students' motivation to learn.

It also confirms that reflection and self-assessment have a significant impact on the development of critical thinking. In the process of analyzing their own activities, students learn to draw evidence-based conclusions, approach problems from different perspectives, and evaluate the decision-making process. This is of great importance not only in their academic, but also in their social and professional activities [5; 25 p.].

The analysis conducted from the point of view of teacher activity showed the role of the reflexive approach in improving pedagogical skills. The teacher's analysis of his/her own activities after the lesson, the assessment of the effectiveness of the methods and tools used, serves to improve the educational process. As a result, the teacher has the opportunity to redesign the lesson process, adapting it to the needs and capabilities of students.

The effectiveness of reflection and self-assessment directly depends on their systematic and purposeful organization. If these processes are carried out episodically or formally, it becomes difficult to achieve the expected results. On the contrary, when reflective activity is made an integral part of the educational process, students' attitude towards the educational process changes in a positive direction.

Reflection and self-assessment also serve to create a positive psychological environment in the educational process. Students learn to express their opinions freely and accept mistakes as opportunities for development. This leads to a strengthening of the atmosphere of trust, openness and cooperation in the educational process.

Conclusion. In the modern education system, reflection and self-assessment are increasingly recognized as important pedagogical factors that increase the effectiveness of the educational process. The

conducted analyses show that these pedagogical mechanisms directly affect the conscious assimilation of knowledge, a critical approach to their own activities and personal development of students. Through reflection, students have the opportunity to deeply analyze their knowledge and skills, which increases their activity in the educational process.

Self-assessment plays an important role in the formation of responsibility, independence and self-management competencies in students. As the student learns to evaluate his/her own work, dependence on external evaluation decreases and internal motivation increases. This situation serves to form a culture of continuous development and self-improvement in the educational process.

Reflection is also an important methodological tool in the work of a teacher. The teacher's analysis of his/her own pedagogical experience, evaluation of the lesson process and drawing conclusions serve to improve the quality of education. The educational process organized on the basis of a reflective approach creates an atmosphere of effective cooperation and mutual trust between the teacher and the student.

In conclusion, reflection and self-assessment are an integral part of modern education, and it is necessary to systematically and purposefully introduce them into the educational process. These processes not only increase the quality and effectiveness of education, but also ensure the personal and professional development of students. Therefore, the development of reflective and evaluative activities should remain one of the priorities of modern educational policy and pedagogical practice.

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Bannayev Qosimjon Qodirjonovich (Independent researcher at Namangan state technical university)

ENHANCING STUDENTS’ PROBLEM-SOLVING AND TECHNICAL THINKING THROUGH PROJECT-BASED LEARNING: A PEDAGOGICAL FRAMEWORK

Annotation. *Contemporary education increasingly prioritizes the development of technical thinking and complex problem-solving skills as essential competencies for participation in a technology-driven society. This study proposes a pedagogical framework grounded in Project-Based Learning (PBL) to cultivate these competencies. Drawing upon theories of cognitive science, computational literacy, and systems thinking, the framework explains how iterative and inquiry-based projects transform abstract knowledge into functional technical intuition. Technical thinking is conceptualized as a dual construct combining artifact-level understanding and systems-oriented reasoning. Complex problem-solving is analyzed through cognitive flexibility and metacognitive regulation. The findings emphasize that authentic, real-world projects and the failure-correction cycle inherent in PBL significantly contribute to durable cognitive restructuring. The study concludes that PBL, when systematically designed and evaluated, fosters transferable technical heuristics and innovation-oriented reasoning among learners.*

Keywords: *technical thinking, project-based learning, complex problem-solving, cognitive flexibility, experiential learning.*

Bannayev Qosimjon Qodirjonovich (Namangan davlat Texnika universiteti mustaqil tadqiqotchisi)

TALABALARNING MUAMMO YECHISH VA TEXNIK TAFAKKURINI LOYIHAGA ASOSLANGAN TA’LIM ORQALI RIVOJLANTIRISH: PEDAGOGIK MODEL

Annotatsiya. *Zamonaviy ta’lim texnologiyalarga tayangan jamiyatda samarali ishtirok etish uchun zarur bo‘lgan muhim kompetensiyalar sifatida texnik tafakkur va murakkab muammolarni hal qilish ko‘nikmalarini rivojlantirishga tobora ko‘proq ustuvor ahamiyat bermoqda. Ushbu tadqiqot mazkur kompetensiyalarni shakllantirishga qaratilgan Loyihaga asoslangan ta’lim (Project-Based Learning – PBL) ga tayanuvchi pedagogik modelni taklif etadi. Kognitiv fan, hisoblash savodxonligi va tizimli fikrlash nazariyalariga tayangan holda, model iterativ hamda izlanishga asoslangan loyihalar abstrakt bilimlarni funksional texnik intuitsiyaga qanday aylantirishini tushuntiradi. Texnik tafakkur artefakt darajasidagi tushuncha va*