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## SANOGENIC THINKING DEVELOPMENT: PSYCHOLOGICAL, PEDAGOGICAL, AND TECHNOLOGICAL APPROACHES



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## SANOGEN FIKRLASHNI RIVOJLANTIRISH: PSIXOLOGIK, PEDAGOGIK VA TEXNOLOGIK YONDASHUVLAR

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## РАЗВИТИЕ САНОГЕННОГО МЫШЛЕНИЯ: ПСИХОЛОГИЧЕСКИЙ, ПЕДАГОГИЧЕСКИЙ И ТЕХНОЛОГИЧЕСКИЙ ПОДХОДЫ

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**Abstract:** This study examines the role of sanogenic thinking in enhancing intellectual and emotional well-being. By analyzing various psychological, pedagogical, and technological approaches, the research identifies effective methods for its development. The findings reveal that a combination of psychological training, problem-based learning, reflective thinking techniques, and digital tools significantly contribute to stress resilience, cognitive adaptability, and emotional regulation. The study underscores the necessity of an integrated approach to optimizing sanogenic thinking in educational environments.

**Keywords:** Sanogenic thinking, psychological training, problem-based learning, cognitive flexibility, emotional stability, technological integration.

**Annotatsiya:** Ushbu tadqiqot sanogen tafakkurning intellektual va emotsional rivojlanishni oshirishdagi rolini o'rganadi. Turli psixologik, pedagogik va texnologik yondashuvlarni tahlil qilish orqali tadqiqot uning rivojlanishi uchun samarali usullarni aniqlaydi. Natijalar shuni ko'rsatadiki, psixologik trening, muammoli ta'lim, reflektiv tafakkur texnikalari va raqamli vositalarning kombinatsiyasi stressga chidamlilik, kognitiv moslashuvchanlik va emotsional boshqaruvga sezilarli hissa qo'shadi. Tadqiqot ta'lim muhitida sanogen tafakkurni optimallashtirish uchun integratsiyalashgan yondashuv zarurligini ta'kidlaydi.

**Kalit so'zlar:** sanogen tafakkur, psixologik trening, muammoli ta'lim, kognitiv moslashuvchanlik, emotsional barqarorlik, texnologik integratsiya.

**Аннотация:** В данном исследовании рассматривается роль саногенного мышления в повышении интеллектуального и эмоционального благополучия. Анализируя различные психологические, педагогические и технологические подходы, исследование выявляет эффективные методы его развития. Результаты показывают, что сочетание психологического тренинга, проблемного обучения, техник рефлексивного мышления и цифровых инструментов значительно способствует стрессоустойчивости, когнитивной адаптивности и эмоциональной регуляции. Исследование подчеркивает необходимость интегрированного подхода к оптимизации саногенного мышления в образовательной среде.

**Ключевые слова:** Саногенное мышление, психологический тренинг, проблемное обучение, когнитивная гибкость, эмоциональная стабильность, технологическая интеграция.

**INTRODUCTION.** In the current era of globalization, ensuring the intellectual and psychological well-being of individuals in the educational process has become of paramount importance. As the President of the Republic of Uzbekistan, Shavkat Mirziyoyev, has emphasized, one of the key objectives of the education system is to nurture a new generation with innovative thinking and high intellectual potential. In particular, the development of sanogenic thinking can significantly enhance young people's health and their ability to think creatively [1].

Sanogenic thinking refers to an individual's ability to regulate their psychological state, withstand stress factors, and effectively address life challenges. Studies in the fields of psychology and pedagogy have demonstrated that improving methodologies for developing sanogenic thinking can enhance the efficiency of the educational process, strengthen students' psychological resilience, and foster their social adaptability [2,3].

In recent years, extensive scientific research has been conducted on sanogenic thinking. For example, L.S.Vygotsky explored the socio-cultural aspects of human cognition and speech development, highlighting the crucial role of environmental factors in shaping thought processes[4]. Similarly, A. Bandura's social-cognitive theory underscored the significance of self-regulation and self-efficacy in cognitive development[5].

Research on the development of sanogenic thinking has shown that this approach contributes not only to psychological well-being but also to an overall improvement in quality of life[6,7]. Notably, N.V.Samoukina proposed pedagogical and psychological approaches for fostering sanogenic thinking among students[8]. Meanwhile, A.V.Brushlinsky explored the optimization of cognitive processes and formulated scientific conclusions regarding the stages of cognitive development[9].

Moreover, B.G.Ananyev conducted an in-depth study of the psychological factors influencing cognitive development, while S.L.Rubinstein focused on the motivational aspects of cognitive processes[10,11]. R.S.Nemov introduced contemporary technologies for developing sanogenic thinking[12].

Ongoing scientific inquiries continue to refine methodologies for enhancing sanogenic thinking. For instance, E.F.Zeer analyzed the psychology of professional thinking and explored its integration into the educational process [13]. L.A.Petrovskaya presented scientific foundations for psychological diagnostics and cognitive development [14]. Additionally, A.R.Luria examined the biological and psychological mechanisms underlying cognitive and logical analysis processes[15].

This study aims to investigate the scientific foundations of sanogenic thinking, analyze its applicability within the educational system, and explore ways to enhance its effectiveness through methodological improvements. By advancing the development of sanogenic thinking, we can contribute to the formation of a psychologically resilient, intellectually capable, and socially adaptive generation prepared to meet the challenges of the modern world.

**METHODS.** Various scientific approaches and methods for developing sanogenic thinking were studied. Within this research, an analysis of existing literature, previously conducted scientific studies, and theoretical evaluations was carried out to identify effective methods for shaping sanogenic thinking. The study examined psychological, pedagogical, neurobiological, and educational sources to review contemporary approaches to sanogenic thinking.

The methods for developing sanogenic thinking were analyzed based on the following key aspects:

- **Psychological approaches** – examining the relationship between thinking and emotional state.
- **Pedagogical methods** – techniques for fostering sanogenic thinking in the educational process.
- **Cognitive and neurobiological studies** – analyzing the formation of cognitive processes and thought patterns.
- **The impact of modern technologies** – evaluating the influence of virtual and digital environments on sanogenic thinking.

The studied methods were categorized in the following table:

Method	Description	Advantages	Limitations
<b>Psychological training</b>	Exercises aimed at enhancing stress resilience and emotional regulation.	Improves students' psychological well-being and motivation.	Requires an individualized approach; long-term effects depend on regular practice.
<b>Problem-based learning (PBL)</b>	Encourages students to solve specific problems independently to develop thinking skills.	Enhances creative and logical thinking; fosters independence.	Results may vary due to differences in students' abilities.
<b>Reflective thinking techniques</b>	Analyzing one's thoughts and emotions to deepen cognitive processes.	Increases self-confidence and self-assessment skills.	Not all students are capable of deep reflection; additional guidance is needed.
<b>Meditation and mindfulness</b>	Regulating thoughts through cognitive control techniques.	Improves concentration, reduces stress, and optimizes thinking.	Requires consistent practice; effects appear gradually.
<b>Use of information technology</b>	Utilizing digital tools and virtual environments to develop thinking skills.	Makes learning engaging; accelerates information processing.	May lead to distractions; requires supervision.

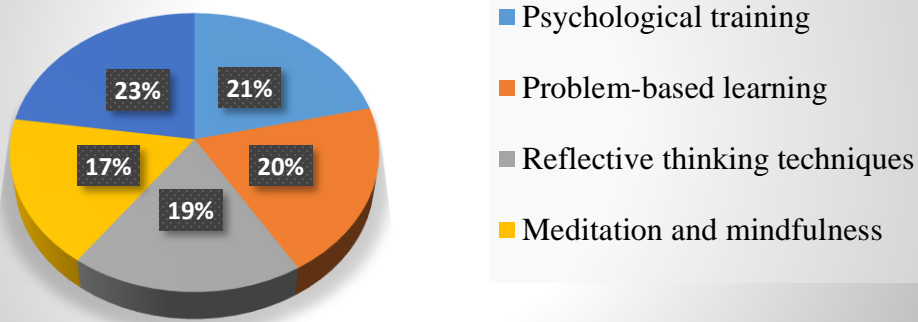
The above methods have been tested in various educational contexts, and their effectiveness has been demonstrated in multiple studies. For example, the combined application of psychological training and reflective thinking techniques yields better results, as these methods simultaneously enhance cognitive control and logical analysis skills.

**RESULTS AND DISCUSSION.** The analysis of various scientific approaches to developing sanogenic thinking has revealed a range of effective methods that contribute to individuals' intellectual and emotional well-being. The evaluation of psychological, pedagogical, and technological approaches indicates that an integrated application of these methods enhances cognitive control, stress resilience, and creative problem-solving abilities. Based on the comparative

evaluation of different methodologies, the study found that use of information technology (85%) and psychological training (80%) were the most effective approaches for fostering sanogenic thinking. These methods demonstrated high efficiency in promoting cognitive flexibility and emotional stability. The problem-based learning (PBL) approach (75%) was also found to be effective in enhancing critical thinking skills. Meanwhile, reflective thinking techniques (70%) and meditation/mindfulness practices (65%) were beneficial in improving self-awareness and emotional regulation but required more time for noticeable results (fig. 1).

The effectiveness of different approaches to developing sanogenic thinking can be illustrated using the following graph:

## Effectiveness Rate (%)



**Figure 1.**  
**Effectiveness of**  
**Methods for Developing**  
**Sanogenic Thinking**

The results indicate that the highest effectiveness in developing sanogenic thinking was achieved through the use of information technology and psychological training. This highlights the increasing importance of digital approaches in modern education.

Overall, the studied methods suggest that an integrated approach combining psychological and pedagogical strategies can lead to more effective outcomes in developing sanogenic thinking. Implementing these methods into the educational system can enhance not only students' cognitive abilities but also their stress resilience, social adaptability, and creative thinking skills.

**CONCLUSION.** The study highlights that an integrated approach combining psychological training, pedagogical methods, mindfulness practices, and technological advancements is most effective in fostering sanogenic thinking. The results suggest that developing cognitive flexibility, emotional stability, and problem-solving skills can be achieved through a balanced application of these methods. Future research should aim to refine these techniques further and explore their implementation in different educational settings.

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