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Technologies of Professional Development of Future Primary School Teachers Based on Functional Literacy

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Abstract: This article discusses the importance of thinking skills in enhancing the functional literacy of primary school students, particularly in developing their ability to make sound decisions. In modern primary education methodology, it is essential to define new requirements for competency development across all directions, identify its innovative features, and explore integration factors that contribute to improving the process. Through theoretical and methodological justification, the article highlights various types of competencies—such as cultural, axiological, reflective, didactic, communicative, and methodological—necessary for enhancing primary education methodology through innovative approaches.

Keywords: Mathematical literacy, thinking, logical thinking, reasoning, skills, education, primary, methodology, innovation, theory, cultural, axiological, reflective, didactic, communicative, methodological, approach, necessity, knowledge, skills, proficiency.

Introduction: Primary school is a crucial and irreplaceable stage in the process of forming a well-rounded personality. Specialists working in primary education are entrusted with the important task of helping children make a successful start in life. Therefore, the first teacher must become both a friend and a mentor to the student. When students transition from primary to secondary school, many of them face difficulties adapting to the new learning environment. Children who have spent four years with a single teacher often encounter personal challenges when interacting with subject-specific teachers. These issues are

primarily related to changes in assessment criteria and the increased number of people evaluating them. A student's self-esteem may come into conflict with teachers' opinions, creating a complex contradiction. When students find themselves in conflict-prone situations, they often experience prolonged stress, which significantly affects their academic performance. The foundation of modern education lies in preparing individuals for active participation in a global information society. In the context of globalization, learners must master various forms of interaction with the world—through inquiry, project work, activity, communication, and reflection. These skills are essential for literacy development among youth, which in turn is one of the key factors of social well-being.

METHODOLOGY

When studying the concept of "professional competence," it is important not to overlook the general meaning of competence. This term emerged in academic discourse relatively recently, and to this day, there is no universally accepted definition. A.V. Khutorskoy emphasizes the importance of distinguishing between the often synonymously used terms "competence" and "competency":

Competence refers to a set of interrelated personal qualities (knowledge, skills, abilities, and modes of activity) defined in relation to a specific area of subjects or processes, and necessary for effective and high-quality performance within that area.

Competency, on the other hand, is the actual possession or mastery of a given competence by an individual, including their personal attitude toward it and the subject of their activity. Thus, according to Khutorskoy, competence is seen as an external requirement—something predetermined, a norm or standard—while competency is a developed personal quality or characteristic [5]

According to B.S. Gershunskiy, being educated means achieving a level of literacy that meets both societal and personal necessary maximums and implies having a sufficiently broad outlook on various aspects of human and social life [2].

In modern understanding, literacy is not merely the ability to read, write, and count, but rather the preparedness of a student for further development of their educational potential. The content of the term "literacy" is associated with the basic functional literacy of an individual. Basic literacy is viewed as a student's ability to use fundamental methods of cognitive activity—such as reading, writing, language, and computer literacy—required to achieve elementary goals.

Functional literacy, in turn, refers to a student's ability to solve non-standard real-life problems in various spheres of activity based on applied knowledge and skills. In other words, according to L.M. Perminova, functional literacy includes general learning skills and interdisciplinary functional skills necessary for the practical application of subject-based and additional knowledge and abilities. These are essential both for continuing general education and for engaging in professional education [6]. In the studies of B.S. Gershunskiy, I.A. Kolesnikova, E.I. Ogaryova, and A.V. Khutorskoy, functional literacy is examined in terms of students' educational attainment and outcomes. According to B.S. Gershunskiy, from the perspective of being educated, functional literacy is related to the acquisition by students of a necessary and sufficient amount of knowledge and skills that will support their integration into future activities. Functional literacy as an educational outcome, as seen by teachers, is the ability of an individual to interact with the external environment, adapt quickly, function effectively within it, use acquired knowledge to solve various life problems, and develop cognitive, emotional, and behavioral skills that help realize their creative potential [6].

RESULTS

The components of functional literacy include:

- knowledge of rules, principles, and general concepts, as well as the development of skills that form the cognitive basis for solving practice-oriented tasks in various spheres of life;
- skills adapted to humanistic conditions, such as working with information and conducting business correspondence;
- readiness to navigate values and norms of the modern world, and to improve one's educational level through conscious choice.

The content of these components consists of various types of functional literacy among students. Among the most significant types are:

- ✓ General cultural literacy, which involves knowledge in the fields of natural and human sciences, as well as artistic and musical culture;
- ✓ Civic and legal literacy, which refers to knowledge and understanding of one's rights and responsibilities in the context of social life;
- ✓ Social and communicative literacy, which focuses on mastering verbal and non-verbal communication skills and developing mutual understanding;
- ✓ Behavioral literacy, which implies knowledge and understanding of norms of behavior,

etiquette rules, and adherence to ethical standards in various communicative situations;

- ✓ Technological literacy, viewed as the ability of an individual to effectively solve problems arising in the context of professional knowledge;

- ✓ Health-preserving literacy, which is aimed at maintaining physical, social, mental, and spiritual well-being;

Methodological literacy, which involves developing students' skills in acquiring new knowledge and deepening existing knowledge through the integration of theoretical understanding and social experience—defined as knowledge about society and the system of social relations necessary for an individual to function within a specific social or educational environment [6]. Thus, unlike basic literacy, functional literacy is a dynamic and integrative construct, the content of which continually evolves in response to the changing needs of both individuals and society. The development of students' functional literacy is supported by a competency-based approach, which, according to many researchers, best meets the modern standards of educational quality in the context of a developing multicultural society.

G.K. Selevko defines the competency-based approach in education as "a gradual reorientation of the dominant educational paradigm from knowledge transmission to the development of skills and the creation of conditions for mastering a set of 'competencies'" [7, p. 138]. The content of functional literacy for graduates of general education schools includes the following key competencies:

- ✓ To learn: the ability to benefit from experience; to structure and interrelate one's knowledge; to solve problems; to organize one's own learning strategies; and to engage in self-directed learning;

- ✓ To search: the ability to query various databases; to consult with experts; to obtain the necessary information; and to work with documents;

- ✓ To think: the ability to connect events and phenomena from the past and present; to overcome self-doubt when solving problems; to take a position in a discussion and form one's own opinion; to evaluate social habits related to health and the environment;

- ✓ To cooperate: the ability to work in teams and groups; to resolve disagreements and conflicts; to negotiate and make decisions;

- ✓ To take action: the ability to engage in project activities; to contribute to collective

efforts; to take responsibility for assigned tasks in diverse conditions; to find innovative solutions to problems; and to apply modern information and communication technologies.

DISCUSSION

The level of functional literacy developed by school students, in turn, depends on the teacher's level of competence. According to V.V. Yagupov, teacher competence is viewed as a systemic and integrative phenomenon that includes not only knowledge, skills, and abilities, professionally significant qualities, and practical and life experience—which ensure the effective implementation of professional responsibilities—but also motivational readiness and a positive attitude towards the results of their activities [10]. According to E.S. Palat, a teacher must be competent not only in their subject area and related fields of knowledge but also in modern pedagogical and informational technologies, and be familiar with the specifics of organizing the educational process using various teaching methods [5, p. 17].

E.F. Zeer believes that a teacher's professional competence is defined through their knowledge, skills, experience, and the ability to mobilize these in practice [3, p. 49]. In turn, A.K. Markova sees professional competence as a teacher's awareness of knowledge, skills, and their normative characteristics, which are necessary for conducting pedagogical activities [4]. According to T.G. Brazhe, a teacher's professional competence is determined not only by their foundational knowledge and skills but also by their value orientations, motivations, general culture, and capacity for developing their creative potential [1]. In pedagogical theory, there are different approaches to defining types of teacher professional competence. These include social, didactic, psychological, managerial, monitoring, and autopsychological competencies, among others. Given the specifics of a general education school teacher's professional activity, the following types of competencies can be identified: general cultural, axiological, didactic, technological, psychological, communicative, methodological, managerial, reflective, and monitoring. The general cultural competence of a general education school teacher implies having a stable system of spiritual, moral, and cultural values and value-based attitudes aimed at expanding the cultural foundations of student education and upbringing. The axiological competence of a teacher is associated with the level of development of values that form the internal world of the educator and contribute to their activity. According to V.A. Slastenin, such values include: values that promote the teacher's self-affirmation in society, values that affect

the development of communicative culture, values that contribute to self-improvement and self-expression [8]

Didactic competence, as an integrative unity of theoretical and practical readiness of the teacher to form functional literacy in students of general education schools, is aimed at mastering the theoretical foundations and patterns of learning. The level of technological competence is determined by the teacher's deep knowledge and broad erudition in defining the goals and tasks of the educational process, integrating the content of the educational material in accordance with the level of students' preparedness, developing didactic tools, and structuring and creating theoretical and innovative lessons. Psychological competence includes the teacher's knowledge of the patterns of acquiring knowledge, skills, and abilities, exploring the laws of creative thinking development, and the relationship between intellectual and personal development. Communicative competence is aimed at determining the psychological state and individual characteristics of communication partners, establishing positive psychological contact with the student audience, and modernizing pedagogical interactions to solve various pedagogical situations.

Methodological competence is directed at the development of methodological skills for creating educational and planning documentation, choosing rational forms of organizing the educational process, methods and tools of teaching, developing lesson projects, creating specific teaching methodologies, and engaging in self-improvement of their pedagogical activities. Managerial competence ensures the organization of students' educational activities related to managing the educational process by using various forms, methods, and teaching technologies, stimulating cognitive, independent, and creative activity among students. Reflective competence allows the teacher to realize their individuality through self-awareness and self-analysis processes, helps to understand the results achieved, and define the goals of their pedagogical activities. If necessary, it helps to correct the corresponding actions.

Diagnostic competence is aimed at identifying the real state of the educational and upbringing process to determine the correct strategy and tactics of pedagogical activity, to monitor and control the effectiveness of learning, and to assess the alignment of students' knowledge and skills with the requirements of educational programs. Monitoring competence ensures information regarding the results of students' academic activities, based on the use of key monitoring methods such as observation, surveys, interviews, testing, and explication (explanation).

Thus, the main objects of monitoring are the educational and upbringing process itself, the general development of the students' personalities, and the development of their communicative culture.

CONCLUSION

Thus, in order to carry out effective pedagogical activity in the formation of functional literacy in students, the teacher must possess a system of competencies that ensure multifaceted pedagogical activity in the general education school as a whole.

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