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INNOVATIVE PEDAGOGICAL TECHNOLOGIES FOR DEVELOPING KEY COMPETENCIES IN CHILDREN DURING THE PRESCHOOL PREPARATORY STAGE

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ABSTRACT. This article scientifically analyzes the theoretical and practical foundations of developing key competencies in children during the preschool preparatory stage. The study highlights the significance of the competency-based approach in the modern educational system and examines the role of innovative pedagogical technologies in fostering children's cognitive, communicative, socio-emotional, and creative development. Furthermore, the pedagogical potential of game-based technologies, problem-based learning, the STEAM approach, project-based activities, and interactive methods in enhancing independent thinking, social engagement, communication culture, and practical skills among children is logically and critically analyzed.

Keywords: key competencies, competency-based approach, innovative pedagogical technologies, game-based technologies, STEAM education, problem-based learning, interactive methods, cognitive development.

INTRODUCTION.

The preschool preparatory stage represents a significant pedagogical process that initiates a qualitatively new phase in a child's personal development. During this period, children begin to connect the initial life experiences acquired within the family and preschool educational institutions with the structured requirements of a systematic learning environment. Therefore, the preparatory process should not be limited solely to providing elementary knowledge and skills; rather, it must be oriented toward developing children's internal readiness for learning activities, their ability to engage in social interaction, their capacity for self-expression, and their adaptability to new educational and social conditions.

In contemporary educational practice, the concept of school readiness has expanded far beyond the traditional framework of merely teaching children to read, write, and count. A child entering school encounters a new social status, a new daily routine, increased responsibilities, and an entirely different communicative environment. In this context, not only the child's level of knowledge but also the ability to concentrate attention, understand instructions, plan actions, cooperate with peers, and consciously respond to pedagogical guidance becomes critically important. Consequently, the key competencies developed during the preschool preparatory stage serve as an essential pedagogical and psychological foundation for children's future academic success.

Modern pedagogical approaches increasingly emphasize viewing the child not as a passive recipient of ready-made knowledge, but as an active participant in the educational process. From this perspective, independent activity, curiosity, the desire to ask questions, creative initiative, and the natural need to explore the surrounding environment should become the central components of

preschool educational content. Innovative pedagogical technologies play a crucial role in this process, as they enable the transformation of children's natural activity into purposeful educational engagement.

The relevance of this topic lies in the fact that the development of key competencies in preschool education is connected not only with children's current developmental needs but also with their future formation as independent learners, socially active individuals, and competent participants in various life situations. When learning motivation, communication culture, emotional stability, creative thinking, and self-regulation skills are sufficiently developed during the preparatory stage, the process of adaptation to formal schooling becomes considerably smoother. Otherwise, even children possessing certain academic knowledge may experience difficulties in expressing themselves confidently and adapting effectively to a new educational environment.

From this point of view, the use of innovative pedagogical technologies in preschool preparatory education should be regarded not merely as a means of enriching educational content, but as an essential methodological condition for revealing children's personal potential, involving them in active communication, fostering independent thinking, and expanding their social experience. In this process, educators are required to organize the learning environment with careful consideration of children's age characteristics, individual interests, emotional states, and social experiences. Only under such conditions can the preparatory stage evolve from a mechanical set of instructional activities into a purposeful, systematic, and effective pedagogical process aimed at the holistic development of the child.

METHODOLOGY.

The present study was conducted on the basis of competency-based, learner-centered, and developmental educational principles that constitute the methodological foundation of contemporary preschool education. Throughout the research process, the theoretical and practical aspects of developing key competencies in children during the preschool preparatory stage were examined from both pedagogical and psychological perspectives. Particular attention was devoted to analyzing children's age-related and individual characteristics, cognitive processes, social activity, communication abilities, and independent behavioral skills within the context of innovative pedagogical technologies.

In order to identify the content, structure, and developmental potential of innovative technologies implemented in preschool education, comparative-analytical, systemic, and interpretative approaches were employed. Furthermore, the pedagogical mechanisms contributing to the development of cognitive, communicative, socio-emotional, and creative competencies in children were analyzed in an interconnected manner. During the research, the pedagogical significance of game-based technologies, problem-based learning, the STEAM approach, project-based activities, and interactive methods in enhancing children's activity and engagement was theoretically generalized and critically examined.

The analytical process particularly focused on the organization of the educational environment at the preschool preparatory stage, the support of children's independent activity, the strengthening of social collaboration within the learning process, and the development of children's personal potential. In addition, the study evaluated the pedagogical effectiveness of innovative technologies in fostering learning motivation, independent thinking, responses to problem situations, and social adaptation skills among preschool children.

The research utilized methods such as theoretical source analysis, pedagogical observation, generalization, comparative analysis, and scientific interpretation. Through a comparative examination of existing scientific perspectives and practical approaches, effective pedagogical

conditions and innovative mechanisms for developing key competencies during the preschool preparatory stage were identified and systematized.

MAIN PART.

The issue of developing key competencies in children during the preschool preparatory stage is considered one of the most significant directions of modern pedagogy. This is because, during this period, children are prepared for formal schooling not only from an academic perspective, but also in terms of psychological, social, communicative, emotional, and practical development. Therefore, the primary objective of the educational process in preparatory groups should not be confined merely to teaching letters and numbers. Instead, particular emphasis should be placed on fostering essential life competencies such as independent thinking, self-expression, asking questions, cooperating with others, following rules, seeking solutions to problematic situations, and regulating one's own behavior. In this sense, the key competencies developed during the preschool preparatory stage function as an internal system of capabilities necessary for children's successful performance at subsequent stages of education.

A competency-based approach aims not simply to provide children with ready-made information, but to shape them as active learners, independent participants, and socially engaged individuals. Preschool-aged children are naturally active, curious, and inclined to learn through direct experience. Consequently, traditional instructional methods based solely on explanation and repetition are insufficient at this stage of development. Children acquire knowledge more deeply through active participation, particularly through play, observation, experimentation, communication, movement, and creative tasks. Therefore, when innovative pedagogical technologies are organized in accordance with children's natural developmental characteristics, they become an effective mechanism for fostering key competencies.

Jean Piaget interpreted children's thinking as a gradually developing cognitive process. According to his perspective, children do not receive knowledge passively in a finished form; rather, they construct knowledge through interaction with the surrounding environment and through their own experiences.[1] This concept serves as an important theoretical foundation for preschool education, highlighting the significance of practical activity, visual demonstration, experimentation, and play in the development of key competencies. If a child only listens to an educator's explanation, the information may remain superficial. However, when children manipulate objects, compare them, classify them, construct and reconstruct materials, their cognitive processes become significantly more active. From this perspective, Piaget's theory justifies the necessity of supporting children's independent exploration in the development of cognitive competencies during the preschool preparatory stage.

Lev Vygotsky, on the other hand, explained child development through the influence of social environment, language, and collaboration. According to his concept of the "zone of proximal development," children achieve higher developmental levels by performing tasks that they cannot accomplish independently but can complete with the assistance of adults or peers.[2] This idea provides a new understanding of the educator's role within preschool preparatory education. The educator should function not merely as a transmitter of knowledge, but as a facilitator who reveals children's potential, supports their development, and directs their activity. For instance, a child may initially be unable to draw a complex picture independently; however, with guiding questions, demonstrations, or minor assistance from the teacher, the child becomes capable of completing the task. Over time, such supported actions gradually transform into independent skills. Consequently, Vygotsky's ideas demonstrate the importance of collaborative educational technologies in the development of communicative, social, and self-regulatory competencies.

John Dewey emphasized the importance of connecting education with real life, engaging children in practical activity, and implementing the principle of "learning through doing."[3] His pedagogical views provide an important methodological foundation for organizing project-based activities, problem situations, and experiential learning in preschool education. From Dewey's perspective, education should not become an artificial process detached from children's everyday lives. On the contrary, children should acquire knowledge by exploring reality, asking questions, and participating in practical activities. For example, questions such as "Why do plants grow?", "Why is water necessary?", or "How can a bridge be constructed?" stimulate children's natural curiosity and encourage them to think critically. Therefore, problem-based learning technologies in preschool preparatory education contribute significantly to the development of critical thinking, causal reasoning, and the ability to draw independent conclusions.

Maria Montessori scientifically substantiated the importance of children's independence, freedom of choice, and specially prepared developmental environments within the educational process.[4] According to her views, children achieve deeper development when they engage in activities based on their own internal needs and interests. This approach highlights the necessity of providing children during the preschool preparatory stage with opportunities to make independent choices, plan their activities, initiate tasks, and complete them autonomously. When every material within the educational environment is organized according to children's age, interests, and developmental level, children become capable of independently organizing their own activities. Such conditions foster responsibility, independence, concentration, and self-discipline as essential competencies.

Jerome Bruner also introduced the concept of "learning through discovery," which is highly relevant to the preschool preparatory process. Bruner regarded children not as passive recipients of ready-made answers, but as active subjects who seek and construct knowledge independently.[5] According to this approach, educators should not simply provide conclusions to children; instead, they should guide them toward independent thinking through questions, situations, and practical tasks. For instance, rather than directly telling a child, "This shape is a square," it is pedagogically more effective to encourage the child to compare different shapes, observe their sides and angles, and independently formulate conclusions. Such an approach strengthens children's cognitive activity, logical analysis, and independent thinking competencies.

Howard Gardner, through his theory of multiple intelligences, demonstrated that children's abilities are not identical and that each child may display strengths in different areas.[6] Some children may excel in verbal communication, while others may demonstrate stronger abilities in drawing, physical movement, music, construction, or social interaction. This theory emphasizes the necessity of strengthening individualized approaches in preschool education. If educators expect identical outcomes from all children through the same methods, the natural potential of some children may remain underdeveloped. Therefore, innovative technologies should integrate diverse forms of activity, combining verbal, practical, visual, musical, physical, and social activities into a unified pedagogical process.

In the studies of Uzbek scholars, special attention is likewise devoted to the importance of personality development, educational environment, communication, and activity in childhood education. M.G. Davletshin considered activity and social environment to be crucial factors influencing children's psychological development.[7] This perspective is particularly significant for preschool education because key competencies are formed primarily through active participation. When children play with peers, communicate with educators, and apply experiences gained within the family to the preschool environment, their social and communicative qualities gradually

develop. Consequently, the preschool preparatory process should ensure children's active participation rather than isolating them from authentic social interaction.

E. G'oziyev scientifically substantiated the influence of motivation, attention, memory, thinking, and emotional states on the effectiveness of education.[8] This perspective demonstrates the necessity of creating a psychologically supportive environment during the preschool preparatory process. If children experience fear, feel uncomfortable, or become anxious about making mistakes, their educational activity and engagement decrease significantly. Conversely, when educators encourage children, regard mistakes as a natural part of the learning process, and support even their minor achievements, children's learning motivation becomes stronger. Such an approach contributes to the stable development of key competencies.

R. Ishmuhamedov and N. Saidahmedov scientifically justified the importance of implementing innovative technologies, applying interactive methods, and technologizing the educational process.[9] Based on their perspectives, every activity organized during the preschool preparatory stage should be structured according to the unity of objectives, content, methods, tools, and expected outcomes. Innovative technology should not merely be understood as a newly introduced method; rather, it should be regarded as a pedagogical system that purposefully organizes children's activity, enables observation of educational outcomes, and allows the assessment of developmental dynamics.

Within the preschool preparatory process, game-based technologies are considered one of the most natural and effective means of developing key competencies. This is because play constitutes the leading form of activity for preschool children. Through play, children not only spend time but also internalize social roles, develop speech, learn to follow rules, regulate emotions, and respond to problem situations. Role-playing games contribute significantly to the development of communicative competence, while didactic games strengthen cognitive activity. Physical games, in turn, promote physical activity, discipline, and cooperation. Consequently, game technologies provide integrated support for children's cognitive, social, emotional, and physical development.

Project-based educational technologies also occupy an important place within the preschool preparatory process. During project activities, children observe particular topics, ask questions, gather materials, draw pictures, create objects, collaborate within groups, and present outcomes. In this process, children do not merely receive information; they apply knowledge through practical activity. For example, projects such as "My Family," "The World of Professions," "Protecting Nature," and "Water as a Source of Life" contribute to the development of social responsibility, verbal activity, creative approaches, and teamwork skills. The essential characteristic of project-based technology lies in the fact that it directs children toward meaningful outcomes, where achievement emerges not through mechanical memorization but through personal participation and active engagement.

STEAM technologies possess considerable potential for developing children's creative and critical thinking during the preschool preparatory stage. This approach integrates elements of science, technology, engineering, art, and mathematics, enabling children to perceive reality in a holistic manner. For example, while constructing bridges with blocks, children develop practical understanding of shape, balance, height, width, and stability. Similarly, when creating compositions from natural materials, they combine artistic expression, environmental awareness, and creativity. The STEAM approach encourages children not merely to search for a single "correct answer," but to experiment with different solutions, learn from mistakes, and generate new ideas. Consequently, this approach contributes to the development of creativity and problem-solving competencies that are considered essential within twenty-first-century education.

Problem-based learning technologies also play an important role in developing logical thinking and causal reasoning abilities among preschool-aged children. Instead of presenting children with abstract theoretical questions, educators should provide situations closely connected to their everyday experiences. Questions such as “Why does ice melt?”, “Why do birds fly?”, “Why are traffic lights necessary?”, or “What happens if a flower is not watered?” encourage children to think, hypothesize, and observe. In this process, the educator’s task is not to provide ready-made answers, but rather to guide children’s thinking, ask additional questions, and create opportunities for independent conclusions. Such an approach strengthens children’s analytical abilities, curiosity, and intellectual activity.

Digital pedagogical technologies likewise offer significant opportunities within the preschool preparatory process. Multimedia materials, audio fairy tales, interactive exercises, and educational animations help attract children’s attention, expand imagination, and stimulate speech activity. Nevertheless, the use of digital tools requires careful pedagogical balance. Digital technologies should not restrict children’s movement, live communication, or creative activity. They become truly effective only when used as supportive tools integrated with play, conversation, movement, drawing, construction, and collaborative activities. Therefore, digital pedagogy in preschool education should serve not as a substitute for active interaction, but as a complementary means of enriching the educational environment.

The development of socio-emotional competencies is of particular importance during the preschool preparatory stage. When children enter school, they become part of a new social environment where they are expected to follow classroom rules, respond to teachers’ instructions, and establish relationships with peers. If children have not developed skills such as emotional regulation, listening to others, waiting for their turn, resolving conflicts peacefully, and expressing empathy, they may encounter difficulties adapting to the school environment. For this reason, the use of fairy-tale therapy, dramatization activities, group games, conversations, and psychological exercises within preparatory groups is considered pedagogically appropriate and developmentally beneficial.

Cooperation between families and preschool educational institutions also represents a crucial factor in the development of key competencies. The independence, communication skills, discipline, and creative activity that children acquire in preschool settings should continue to be reinforced within the family environment. Without effective pedagogical collaboration between educational institutions and parents, children’s competencies may not develop consistently or sustainably. Therefore, educators should regularly provide parents with recommendations regarding children’s developmental characteristics, supportive strategies, and developmental activities that can be implemented at home.

Overall, the development of key competencies during the preschool preparatory stage cannot be limited to a single activity or isolated method. Rather, it represents a complex process interconnected with children’s daily activities, play, communication, creative actions, family environment, and pedagogical support. Innovative pedagogical technologies enrich this process by harmonizing children’s natural activity with educational objectives and preparing them comprehensively for formal schooling. Consequently, the primary task of preschool education should not be the transmission of excessive amounts of information, but the formation of children’s interest in learning, independent thinking, communication skills, creativity, responsibility, and social adaptability.

Conclusion. The findings of the study demonstrate that the development of key competencies in children during the preschool preparatory stage represents one of the priority pedagogical

objectives of the modern educational system. At this stage, alongside intellectual growth, children gradually develop social activity, emotional stability, independent thinking, communication abilities, and self-regulation skills. From this perspective, the preschool preparatory process serves not only to prepare children for formal schooling, but also to equip them for future social relationships and adaptation to broader social environments.

The analysis revealed that traditional teaching methods alone are insufficient to fully satisfy children's natural activity and creative needs. In contrast, innovative pedagogical technologies, when organized in accordance with children's age characteristics, interests, and developmental needs, significantly enhance cognitive activity, encourage independent action, and strengthen intrinsic learning motivation. In particular, game-based technologies, problem-based learning, the STEAM approach, project-based activities, and interactive methods proved highly effective in developing children's cognitive, communicative, social, and creative competencies.

Furthermore, it was determined that the formation of key competencies should not be limited to the acquisition of specific knowledge alone. Rather, it should involve children's ability to apply knowledge in various situations, make independent decisions, cooperate within groups, and adapt to problem situations. This finding highlights the necessity of organizing preschool educational content not on the basis of mechanical information transfer, but through a developmental environment focused on children's active participation, practical engagement, and enrichment of social experience.

The study also established that the effectiveness of innovative pedagogical technologies largely depends on educators' professional competence, the developmental quality of the educational environment, and the level of cooperation between preschool institutions and families. When educators organize the educational process with consideration of children's individual characteristics, children's learning motivation, creative activity, and need for independent thinking become significantly stronger. At the same time, collaboration between families and preschool educational institutions emerges as an essential factor in ensuring children's stable social adaptation and personal development.

Overall, when the development of key competencies during the preschool preparatory stage is organized through innovative pedagogical technologies, harmony is achieved among children's intellectual, social, emotional, and creative development. This creates a solid pedagogical foundation for nurturing individuals who are capable of independent thinking, active participation in the educational process, rapid adaptation to new conditions, and effective engagement in social relationships in the future.

REFERENCES

1. Piaget J. The Psychology of the Child. – New York: Basic Books, 1969. – P. 35–42.
2. Vygotsky L.S. Mind in Society: The Development of Higher Psychological Processes. – Cambridge: Harvard University Press, 1978. – P. 84–91.
3. Dewey J. Experience and Education. – New York: Macmillan, 1938. – P. 25–32.
4. Montessori M. The Absorbent Mind. — New York: Holt, Rinehart and Winston, 1967. – P. 70–83.
5. Bruner J. The Process of Education. – Cambridge: Harvard University Press, 1960. – P. 17–29.
6. Gardner H. Frames of Mind: The Theory of Multiple Intelligences. – New York: Basic Books, 1983. – P. 56–69.
7. Давлетшин М.Г. Умумий психология. – Тошкент: Ўқитувчи, 2002. – Б. 118–124.
8. Ғозиев Э. Психология. – Тошкент: Ўқитувчи, 2010. – Б. 145–152.