LOCAL AND INTERNATIONAL RESEARCH CARRIED OUT ON THE IMPLEMENTATION OF PHENOMENON-BASED LEARNING AND HIGHER-ORDER COGNITIVE DEVELOPMENT

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https://doi.org/10.5281/zenodo.14202046

Annotation

The current article focuses on looking through the research carried out both on a local and international level on the usage of the phenomenon based-learning approach in the education system of Uzbekistan and the target group in which it has been implemented and what skills are targeted to develop in the assistance of this approach. Also, it investigates the work of researchers whose main focus was the development of cognitive competencies, specifically higher-order cognitive domain specified in Bloom's taxonomy.

Key words

Phenomenon-based learning, cognitive development, critical thinking, problem solving, decision making, self-directed study, meta-subject skills

The local researcher investigating the implementation of phenomenon-based learning among school pupils is Khusanova Khilola Khaqberdiyevna. Her research focuses on enhancing the productive skills of school children, particularly listening and speaking, through the phenomenon-based learning approach. She contrasts this approach with project-based learning, emphasizing that while project-based learning encourages students to broaden their knowledge and skills by working on projects related to educational material, it may not effectively promote structured learning. Project-based learning primarily aims to develop students' independent problem-solving abilities. The main formats of project-based learning include problem-based lectures, where the teacher identifies potential solutions to a given situation, and practical classes where students collaborate to explore possible mechanisms for addressing issues presented by the teacher. However, the fundamental lesson format remains unchanged. Through participation in project activities, students cultivate critical thinking, autonomy, effective communication, and problem-solving skills.[1]

The phenomenon-based approach to learning focuses on real-world phenomena, linking topics and problems to real-life situations. This approach allows students to apply knowledge and skills across different subjects and beyond the classroom. Phenomenon-oriented learning involves studying a complete phenomenon as a group to gain knowledge about the real world. An

important aspect of this approach is the lack of isolation, which helps learners understand knowledge and skills within the context of the phenomenon. In this approach, students not only seek answers to their questions about the phenomenon but also determine which school subjects are necessary for understanding it. In the learning process, students are actively involved in shaping their understanding by forming preconceptions, setting goals, and asking questions. While the teacher guides students in their quest for knowledge, the importance of interaction with the teacher remains unchanged. This approach fosters valuable communication skills.

"Phenomenon-based learning technology has the potential to enhance the development of high school students' skills. Through engaging and interactive learning experiences, it nurtures critical thinking and problem-solving abilities, encourages collaborative learning and communication, and enables authentic assessment. PBL technology equips students with the tools to become effective communicators [1]."

Educators should wholeheartedly embrace this technology and incorporate it into their teaching practices to empower students and prepare them for success in both their academic and professional endeavors. Our comprehension of phenomena is confined to what we can perceive through our senses. Therefore, it is essential to recognize and welcome the complexity of this process, which is no easy feat. As human beings, we are part of the world rather than its creators. This intricacy also applies to the learning environments in schools, which cannot be fully controlled, though this does not diminish the importance of careful planning and preparation [1].

From a phenomenological perspective, it necessitates embracing the idea that gaining a new perspective involves letting go of an old one – a challenging process. Educators must be ready to carefully guide students through this process [1].

Concerning the development of cognitive competence, it was the object of research of D. Y. Xudoyberganov, J.A. Mardonkulov, A.A. Ibragimov, G'. A. Nafasov, J.S. Otepbergenov, K. Kudratov, L. R. Zaripov, G.A. Amanova.

Doniyor Y. Xudoyberganov. (2024) in his article 'Stages of Formation of Cognitive Competence in Primary School Students' stated that the development of cognitive competence in elementary school students occurs in three stages [2].

The primary objective of shaping the educational activity of a primary school student is to foster their growth as active participants in their learning.

Students should be capable of independently identifying their goals, utilizing the necessary knowledge and methods to achieve those goals, planning their actions, monitoring their progress, and evaluating their results about their set objectives. This implies that students can engage in self-directed study and strive for personal development and improvement. By the conclusion of the third stage, which marks the end of primary education, a primary school student should possess a crucial human quality – the ability to learn independently. This encompasses the capacity to establish specific goals and attain them through personal effort, apply acquired knowledge, actively engage in self-development and self-directed learning, take initiative, be proactive, and stand up for their beliefs. This readiness is demonstrated in their willingness to take action [3].

At the low level, the student can execute tasks based on a given sample but may struggle with the independent application of theoretical knowledge and often makes mistakes. Moving on to the middle level of cognitive competence, the student can comfortably apply knowledge in familiar situations, albeit with some reliance on teachers for guidance. However, the student may still lack certain meta-subject skills such as summarization and systematization of information. By the graduation of primary classes, a primary school student should ideally possess the crucial quality of independence in learning. This entails setting and achieving goals through personal effort, applying acquired knowledge, actively pursuing self-development and independent education, taking initiative, being proactive, and standing up for personal beliefs [3].

As stated by **L. R. Zaripov and G.A. Amanova,** modern education aims not only to acquire and accumulate knowledge but also to master practical skills and apply knowledge effectively. Competence entails the ability to utilize knowledge and skills in diverse situations. This approach not only emphasizes the practical and professional aspects of education but also sets high standards for the development of future specialists. The intellectual and cognitive development of future specialists has become an increasingly critical focus in higher education. This is primarily due to the fact that the intellectual product is a key driver of economic progress, with intellectual and cognitive assets being the primary form of ownership. A person's intelligence, knowledge, and skills significantly influence the advancement of production, science, and the position of the state in the international arena. Furthermore, intellectual creativity and cognitive productivity serve as a social mechanism that counters regressive trends in societal development. The fewer intellectually and creatively developed individuals are there, the more destructive tendencies tend to emerge in society.

Finally, mental work is essential for personal freedom and self-sufficiency. The more a person utilizes their intelligence to analyze and assess their surroundings, the less susceptible they are to external manipulation.

In the context of the higher education system's development until 2030, the focus is on shaping educational programs that align with students' interests and the needs of the workforce. This involves developing curricula based on individual educational paths to cultivate creative thinking and practical skills in students. Key objectives include implementing methods and technologies to enhance competencies in the educational process, orienting education towards practical skill development, and gradually transferring higher education institutions to the credit-module system [4].

A.A. Ibragimov noted that Cognitive competence is knowledge which is seen as activating the educational processes, taking professional activities effectively, willingness to go, ability to understand the high educational priorities, and the ability to develop knowledge independently. Teacher's cognitive competence - his cognitive competencies are in connection with concrete objects of reality possession and effective manifestation in professional activity [5].

Also, Gulnoz Amanova clarifies that based on the research conducted at Pedagogical University with its analysis of the diversity of factors affecting the formation and development of students' cognitive competence [6], they focus on the following factors: personal factors, subjective factors, organizational factors.

Factors governing the educational process related to pedagogical activity:

Social factors and information-technological factors [6].

Based on the results derived from the research, she comes to several conclusions:

1. Cognitive competence can be an indicator of a student's cognitive activity. 2. Cognitive activity is stimulated by motivation - a set of motives of various origins. 3. When studying pedagogy, we can distinguish four types of motivation for cognitive activity: opportunities, content, process, and self-regulation.

4. There are three levels of cognitive competence development in the study of pedagogy.

5. The level of cognitive competence directly depends on the student's motivation. Content and opportunity motivation provides a normal level, and process motivation – is an average level. A student achieves a creative level with the motivation of self-regulation. It is the process of discovering one's

abilities and expressing oneself to achieve a goal. Everyone needs self-awareness, but not everyone knows how to set a goal and achieve it without losing motivation. 6. Since the levels of cognitive competence are related to motivation, the types of motivation are formed gradually [6].

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