

Conditions for Developing Critical Thinking–Based Intellectual Competence of Future Primary Education Teachers

Pardaboyeva Dilnoza G'aybulla qizi

Senior Lecturer, Tashkent University of Applied Sciences, Uzbekistan

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Abstract: This article analyzes the pedagogical possibilities of developing the intellectuality of future primary school teachers based on critical thinking. The concept of critical thinking, its role in the educational process, as well as ways to increase intellectual potential through modern pedagogical approaches, and the possibilities of developing individual intellectuality are analyzed. Intellectuality is not only the possession of knowledge, but also the ability to think independently, solve problems, draw logical conclusions and create innovations. The study compares the factors affecting intellectual development, the role of modern technologies, the education system and the social environment, traditional and innovative methods, and puts forward practical proposals.

Keywords: Critical thinking, intellectual development, primary education, pedagogical approach, innovation, intellectuality, modern technologies, education system.

Introduction: The modern education system requires teachers not only to transmit knowledge but also to develop students' independent and critical thinking skills. This is especially important at the primary education level, where teachers must possess a high level of intellectual potential.

Critical thinking is the ability to analyze information, evaluate it, and draw reasoned conclusions. Developing this competence in the process of training future teachers is one of the key tasks. Therefore, identifying pedagogical conditions that ensure their intellectual development is a pressing issue. The primary education stage serves as the foundation of this process, and teachers working at this level must demonstrate high intellectual capacity. Critical thinking is one of the main factors contributing to this development.

In this regard, forming critical thinking competencies in future primary school teachers has become an important scientific and practical issue. In today's

rapidly evolving information age, an individual's intellectual potential plays a crucial role in both personal and professional success. Intellectuality reflects not only the level of knowledge but also a combination of thinking style, analytical approach, creativity, and a conscious attitude toward life. Therefore, the development of intellectual capacity is one of the priority directions in modern pedagogy and psychology.

LITERATURE REVIEW AND METHODOLOGY

In the intellectual development of future primary school teachers, self-activation based on acquired knowledge compels them to master content necessary for their future professional activities. Critical thinking is a combination of cognitive abilities and affective dispositions.

According to experts, critical thinking includes the following cognitive skills: interpretation, analysis, evaluation, inference, and self-regulation (Table 1).

Table 1. Critical Thinking Skills and Their Application

Critical Thinking Skills	Application Area / Purpose
Interpretation	Understanding information accurately, communicating it effectively, expressing ideas clearly in professional contexts
Analysis	Selecting relevant information, distinguishing between essential and non-essential data in problem-solving
Evaluation	Critically assessing one's own and others' views, making objective decisions
Inference	Drawing conclusions and identifying appropriate solutions in professional situations
Self-regulation	Reviewing and improving one's work, adapting to professional development

Each of these five skills forms the foundation of critical thinking, and their effectiveness can be assessed using specific criteria. Critical thinking abilities play a significant role in training intellectually competent specialists.

Typically, the development of critical thinking is implemented through system-activity, problem-based, and differentiated approaches. However, multi-level teaching opportunities are not sufficiently utilized. Therefore, the following pedagogical conditions were developed to enhance students' critical thinking:

1. Teacher readiness to implement the process of developing critical thinking, which includes adapting lessons to new requirements, increasing time and resource allocation, designing targeted activities, training educators, and aligning content with critical thinking goals.

2. Learner-centered education, which ensures

individual development and considers students' levels of critical thinking and self-regulation when designing teaching strategies.

3. Three-level instruction:

- o **Standard level:** solving problems, completing assignments, and meeting educational standards.
- o **Creative level:** solving non-standard problems and performing independent tasks requiring creativity.
- o **Research level:** conducting research projects, preparing reports and articles, and applying analytical and creative approaches.

DISCUSSION AND RESULTS

Critical thinking skills represent a multifaceted process that can be developed through various methods. The main skills and their subcomponents are presented in Table 2.

Table 2. Core Skills and Their Components

Core Skills	Components
Problem identification	Formulating unanswered questions, -identifying key features, -gathering facts,

Core Skills	Components
	-defining tasks
	-Identifying similarities and differences,
Classification	-grouping and sorting data,
	-comparing
	-Understanding part-whole relationships,
	-modeling,
Identifying relationships	-analysis and synthesis,
	-sequencing,
	-inductive and deductive reasoning
	-Determining cause-effect relationships,
Drawing conclusions	-identifying differences,
	-evaluating outcomes

The development of critical thinking skills in the educational process enhances future primary school teachers' interest in their profession, strengthens their knowledge base, and fosters a scientific outlook. It also plays a significant role in preparing competitive, critically thinking, and intellectually developed specialists for the labor market.

The core critical thinking abilities include interpretation, analysis, and evaluation.

At the stage of interpretation, the meaning of experiences, situations, data, events, judgments, agreements, beliefs, rules, procedures, and criteria is comprehended. This fundamental skill gives rise to several sub-skills, including classification, decoding meaning, and clarifying significance.

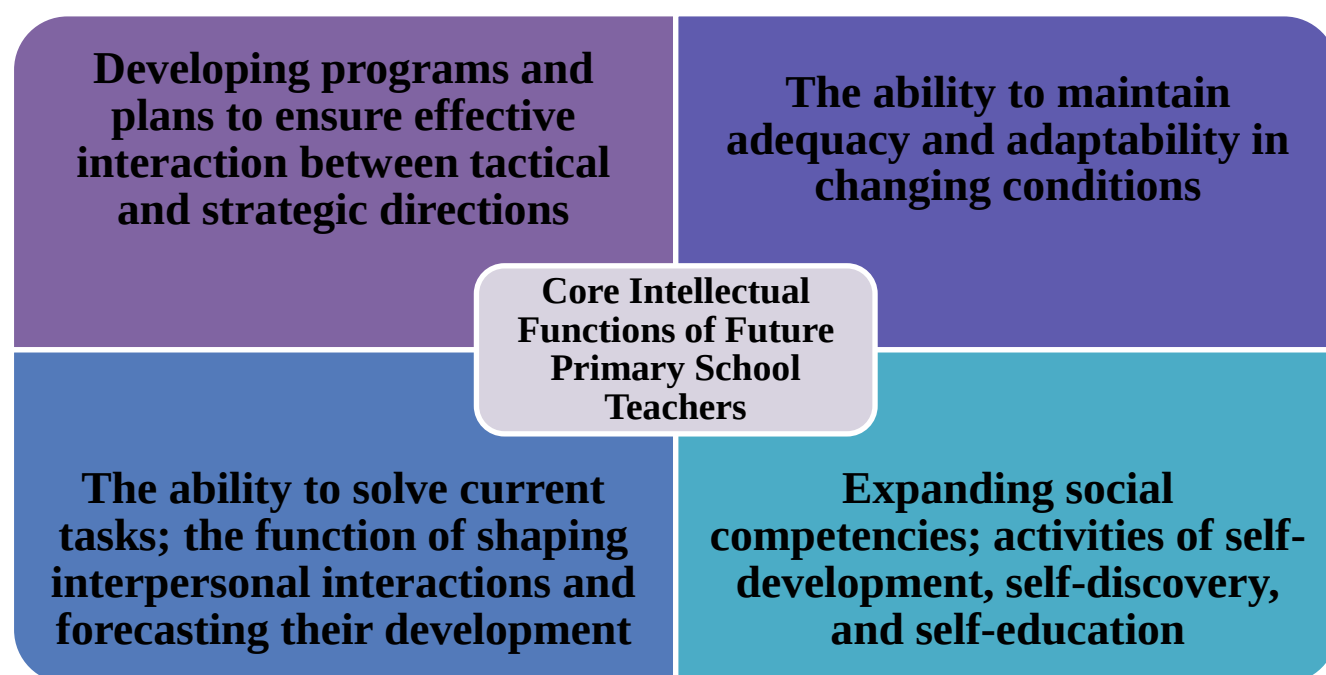
Another essential component of critical thinking is analysis. Analysis refers to the ability to identify and

distinguish logical relationships among ideas, arguments, concepts, descriptions, and other forms of representation such as beliefs, judgments, data, or information. Internal analytical skills include examining ideas, identifying arguments, and evaluating evidence.

Evaluation, in turn, involves assessing the credibility of statements or representations that describe a person's perceptions, experiences, judgments, beliefs, or opinions. It also includes determining the logical strength of relationships among statements, descriptions, and other forms of expressed information.

Within the framework of our research, we identified the key intellectual functions of the individual as a basis for developing the intellectual capacity of future primary school teachers. These are presented in Figure 1 as the core intellectual components relevant to prospective primary educators.

Figure 1. Core Intellectual Functions of Future Primary School Teachers.



The critical thinking ability of future primary school teachers, as well as their capacity to fully master and apply its fundamental principles and methods in practice, creates opportunities for the development of their intellectual potential. Within the framework of higher education modernization programs implemented in our country, the proper use of critical thinking principles and methods, the development of intellectual capacity, and the formation of skills for applying knowledge in real-life situations are recognized as essential priorities.

In our research, we examined the possibilities for developing the intellectual capacity of future primary school teachers based on critical thinking. We conclude that the formation of critical thinking skills in the educational process increases future teachers' interest in their profession, enhances the quality of knowledge acquisition, and contributes to the preparation of competitive and intellectually developed specialists through a scientific approach. This process also supports the development of their professional identity.

CONCLUSION

To ensure the development of critical thinking-based intellectual capacity in future primary education teachers, the following pedagogical conditions are essential:

- extensive use of interactive teaching methods

- implementation of problem-based learning
- effective use of ICT tools
- development of reflection and self-assessment
- support for student independence

These approaches contribute to improving teachers' professional competence and enhancing the quality of education. Based on the analysis of psychological and pedagogical studies, we determined that a teacher's resourcefulness plays a significant role in the success of pedagogical activity. This is because teaching is a regulated process, often constrained by time and characterized by unexpected situations that require rapid decision-making.

Such qualities enable teachers to respond quickly and flexibly to pedagogical situations arising in the course of their work, to modify them effectively, and to introduce a positive, constructive, and purposeful direction. Ultimately, this allows educators to find innovative solutions in real educational and instructional contexts.

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