

# The Actuality And The Content Of Forming Critical Thinking Skills Of Primary School Pupils

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## ABSTRACT

This scientific research article shows the role of critical thinking of primary school pupils and discusses the conditions for its implementation, as well as ways to form critical thinking of the pupils of primary schools.

## Keywords:

primary school pupils, critical thinking, thought education, reading techniques, innovative methods

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## Introduction

Uzbekistan, as an independent, democratic, legal state based on the principles of humanity, encourages diversity of opinion. There is a wide way for a person to express his or her opinion. Thanks to the independence of our country, members of society are increasingly in need of democracy and critical thinking freely. This is especially crucial task for school education. As the diversity of opinions and the ability to express a true opinion in any person is formed in schools. In this process, primary education emerges as an important stage. For this reason, it is a great pedagogical important task of shaping of critical thinking skills of primary school pupils. It is no secret that in the era of globalization, large sums of money are being spent by international forces to change human consciousness, especially to involve them in various thought-provoking currents, to divert them from the right way, and various ideological attacks are on the rise. Today, the language, psyche, intellect and spirituality of our people, especially young people can be easily involved to the dangers of religious fanaticism, ignorance from the wide range of dangerous aspects of open and secret struggles for political, ideological, social, economic, spiritual and aesthetic interests. One of the important factors of protection is to teach our young people to think critically. The foundation

for completing these tasks is exactly the elementary school pupils. The ability of critical thinking of young people serves to increase their socio-political activism. As a critical thinker can deeply analyze the events in society and makes an objective assessment. In this way, they can become socially and politically active in the life of society without straying from the way that they have chosen. Therefore, it is important to form and constantly develop the independent, critical thinking activities of the pupil in the educational process, as a result of which their creative activity, inquisitiveness, volitional qualities, diligence, beliefs are formed. To reach the outcome in the educational process, first of all, we should ensure the "subject-subject" relationship in practice. Primary school pupils need to be actively involved in the learning process so that they can consciously and thoroughly understand new information and apply a critical approach to new information.

## Materials and Methods

Scientific sources on pedagogy, psychology, philosophy, sociology, State Educational Standards (SES), analysis of educational literature and the results of the study of existing pedagogical practice in the field of research showed the need to identify a didactic

system aimed at forming critical thinking levels of primary school pupils.

Social consciousness, intellect, perception of being, the desire to reach the pinnacle of knowledge motivate a person to improve effective ways, forms and methods of thought education, which, in turn, the way for finding effective mechanisms for developing critical thinking skills in the younger generation. Analysis of pedagogical, psychological, sociological literature shows that there are different views on the formation of critical thinking.

One of the great representatives of the Jadid movement, linguist and literary scholar and enlightener Abdurauf Abdurahim ugli Fitrat wrote "Thought and intellect bring a person to perfection and the ability to read and learn makes him happy. The perfect mind of man is a discussion of goodness" in the chapters "Tarbiyayi avlod" (Education of the generation) of the book "Rahbari najod" and "Tarbiyayi fikriya" ("Education of thought") in 1913. [1, p.302]

The highest aspect of humanity is his ability to think. People differ from each other with their unique thoughts, observations, thinking and independent thinking skills. Thus, it is important to cultivate the human mind. In the works of Abdullah Avloni, the interpretation of the education of thought is as follows: Thought causes a person to be virtuous and zealous. This education needs the help of teachers and the strength, beauty and breadth of thought depend on the teacher's upbringing." [2, p.15]

Indeed, great geniuses have mentioned on thought and created certain doctrines such as Aristotle's teaching on the harmony of heart, mind and senses in thinking, Abu Nasr Farabi's on the orientation of thought to goodness, Alisher Navoi's on the orientation of thought to humanity, Umar Khayyam's on the logic of thought, I.P. Pavlov's on the signal system in thinking, P.Ya.Galperin's on the theory of gradual formation of thought and R. Davidov's on generalization in thinking as well.

Today, critical thinking is promoted as a skill which helps to acquire a deeper understanding of what is happening in the socio-political sphere in the 21st century. Teaching critical thinking is also suitable for solving the task of forming qualified personnel who can find their role in the highly professional, creative and socially active life which was described in the "National Training Program" of the Republic of Uzbekistan.

According to the Russian scientist I. Resnik, the main features of critical thinking consists of:

- 1) Pupils develop knowledge and creative thinking only if they can apply their knowledge in solving certain problems;
- 2) Critical thinking stimulates the learning process, turning the lessons into a collaborative activity for the teacher and the pupil. In this sense, the formation of critical thinking of primary school pupils increases their desire to learn and "creates a didactic interaction between teacher, pupils and learning material" in the learning process [3, p.5].

According to German scientist K. Ross, reading can be enhanced based on the knowledge and experience that pupils have acquired before which allows the pupil to connect new information with what they already know. [4, p.6] It is worthwhile to look at the process of assimilation in didactics. As the pupil masters this or that learning material, he or she animates activities and information that are already familiar in his or her work. English scientist Dj. Banks states that critical thinking and reading work well only if teachers understand the diversity of ideas and experiences correctly. If the "spirit of a single answer" prevails, then critical thinking will not be possible [5, p.77]. Uzbek scientist Sh. A. Abdullaeva writes in The Formation of Reflexive Observation Skills of Pupils: "Critical thinking is a form of thinking in which all mental operations (analysis, synthesis, induction, deduction) are involved." [6, p.72] It means that the learner goes through the inductive (attempting to draw conclusions by generalizing some, specific

experiences) and deductive (rising from the general to the individual) stages of the learning process in order to master the presented learning material. Doctor of Psychology, Professor E. Gaziev defines: "Critical thinking is the ability to check one's own and others' opinions, whether these opinions are true or not and to evaluate the discussions and problems." Summarizing all the ideas, critical thinking is a high-level component of knowledge acquisition and independent thinking, a mental phenomenon that expands a person's ability to objectively perceive an event. In critical thinking, ideas and their importance are considered in terms of pluralism and they are compared with other ideas.

It focuses on analysis, comparison, interpretation, application, problem solving, or the discovery of a new idea. In this case: a) any critical thinking arises, is formed as a result of the needs of society and is based on the spiritual and cultural foundations. Any critical thinking is social, it is related to human activity among people; b) Critical thinking is one of the forms of human activity, i.e. it is a critical evaluation of society, social processes and events. It combines forms of knowledge and differs from knowledge of nature (natural science) and knowledge of thinking (gnoseology, logic); c) When critical thinking is formed in pupils, they must first be taught to distinguish constructive ideas from destructive ideas.

To develop critical thinking skills is not an easy task as well. It is also not an issue that can be completed and forgotten at a certain age. There are no certain ways which can lead to critical thinking. However, there is a specific set of teaching conditions to use in order to nurture critical thinkers. In particular, special attention should be paid to the following conditions:

1. To give time and opportunity to acquire critical thinking experience of pupils
2. To give pupils the opportunity to think.

3. To accept different ideas and opinions.

4. To allow pupils to actively participate in the learning process.

5. To convince pupils that they are capable of critical thinking.

However, pupils:

1. They need to develop self-confidence and understand the value of their ideas and thoughts.

2. They should take an active part in the educational process.

3. They should listen respectfully to different opinions.

4. They should be ready to form their own opinions or refrain from them.

The features of critical thinking include:

- critical thinking is independent thinking;

- information is the beginning of critical thinking;

- Critical thinking begins with identifying the problem that needs to be asked and solved;

- critical thinking seeks convincing evidence;

- critical thinking is social thinking.

Critical thinking of primary school pupils is primarily developed through reading and writing. Reading is also important for the formation of critical thinking in pupils, as well as independent assignments on writing story texts, stories, fairy tales and creative essays in native language classes. Through creative writing, pupils' logical, practical-constructive, and inductive-deductive thinking expands and written speech develops. A pupil with a sufficiently developed creative thinking will find a way to solve any problem in the educational process, rely on their own strength, intelligence, acquired knowledge, skills and abilities, and the pupil's thinking will be

sharpened. These are important conditions for pupils to think critically.

Professor O. Rozikov mentions that creative task enhances the heuristic ability of pupils to think. [6, p.72] Primary school pupils are specially trained through writing essays. Pupils are taught mental tasks such as phrasing on specific topics, composing a sentence, following the word structure in a sentence, and determining the cause of an event in the first grade where an oral statement is practiced initially.

From the first grade, children should be taught the rule of thought sequence, what to talk about first, then how to tell the story and how to finish. Making a plan, practicing it from time to time, such as directing the thought by following it, expands the thinking.

In third grade, pupils acquire the skills of contrasting, comparing, analyzing, and synthesizing events. Making statements in each class is intended to be appropriate for the age characteristics of the pupils in order to help them develop their mental activities. Such assignments are not only fun for pupils, but also very useful in terms of forming critical thinking. This type of assignment makes most pupils interested in reading works of art and analyzing them. The selection of interrelated topics is also important for the formation of critical thinking of primary school pupils. Teachers should use questions to determine how a pupil feels when he or she hears the word "critical thinking". Pupils can be approached by a teacher with questions such as: What kind of person is a person who doesn't believe in anything?, What kind of people are people who can only see flaws in a particular flow of information?. A reader who can analyze a situation or texts will turn to different sources. When developing critical thinking of pupils, it is necessary to develop their view of the protagonists of the work as "this is active" and "this is not active." Through such questions, pupils have the opportunity to look for different ways to solve the problem. Critical thinking skills of pupils help to understand what level of heroes are in a particular

work or text. It encourages pupils to make objective assessments of different situations and characters. Pupils realize that negative attitudes do not lead to positive ones because of critical thinking. The teacher should listen to each pupil in detail before announcing the final opinion about the protagonists of the work, and only then express his or her point of view. When a teacher organizes a learning process based on a text, it is advisable to focus on the pupils' ability to express the work or text in their own words. The ability of pupils to distinguish the main idea in a text and answer questions that arise around that idea is of great importance in shaping their critical thinking. It is extremely important to answer questions that arise using the main idea in critical comprehension of the text. For instance, "Which of the points made by the author are important to you and why do you think so?", "How was the problem raised in the play reflected in the lives of the protagonists?", "How is the story constructed, and who is the protagonist?"

### Results and Discussions

Our observations showed that as a result of working on the basis of such technologies, pupils in grades 3-4 began to think critically. Critical thinking is the foundation for reading techniques and reading culture, research skills, and the formation of rapid and consistent thinking skills. It encourages pupils to think logically. Critical thinking skills of pupils are a system which consists of thinking strategies and communication skills as well. This system allows pupils to communicate effectively with the information provided. What is the role and essence of the term strategy in this system? The question arises. This term describes the methodological foundations of educational technology better. A strategy is a set of methods which consist of a specific sequence; it acquires pedagogical significance by having a clearly focused goal. Different aspects of critical thinking have their own relevance in different situations and contexts. For example, the ability to use different methods in solving problem situations, the ability to analyze the information

provided at different levels, the ability to master the technique of formulating questions.

Continuous reading with punctuation is also important in shaping critical thinking of pupils. As the reader reads silently, in the process, internal discussion, learned knowledge is remembered, questions arise, and critical observations are formed in the mind.

Our observations show that in most cases, continuous reading is developed spontaneously, ignoring the importance of this technology in shaping critical thinking. Continuous reading technology can be manifested in the following:

1. The teacher tells the pupils about the experience of getting acquainted with this or that book. In this process, the teacher must be very sincere. If he has not been able to comprehend this work in one reading, he should tell it to the readers without hiding it. This type of teacher conversation should last 3-4 minutes. This conversation is required to be around the plot of the work. There is no need for the teacher to express his or her feelings. If the teacher is not ready to express his feelings, then the work should be limited to the thoughts of the author. When talking about the author of a work, the teacher should focus on what kind of work he did at that age, based on the age characteristics of the pupils. Only then will pupils quickly grasp these situations and accept their exemplary aspects and incorporate them into their lives.

2. The teacher is first required to discuss the title of the work with the pupils. He asked the pupils, "Why is the work so named?" should be asked. Pupils begin to think about what happens in a story of that name. Some readers state their assumptions by linking them to another, familiar work of the same author. Another reader compares the synchronic aspects of this work to examples of folklore. Another group of pupils interprets this reality in relation to their own lives. In such cases, it is appropriate for the teacher to require pupils to express their views in writing. However, the teacher should pay special attention to the fact that the introductory part of the lesson does not stretch.

Some teachers prefer to take the discussion step-by-step after reading the first terms of the story.

3. Most importantly, depending on the size of the text, the teacher, as the manager of the learning process, should have pre-separated 3-4 stops in the text. During pauses, the teacher should ask pupils questions that encourage them to think critically. In this process, unfamiliar words and phrases are required to be explained by the teacher, teaching pupils to refer to dictionaries in order to encourage them to understand their meaning. While reading the text, the teacher should ask the pupils the following questions: "What made the protagonist behave like this?", "What will happen next?", "How did this story make an impression on you and how did it feel?" such as.

It is also advisable to use non-traditional models of teaching to shape the critical thinking of young school-age pupils: collaborative teaching model, modeling, research model of teaching. These models are mainly focused on the pupil personality, with the pupil at the center.

In the formation of critical thinking of primary school pupils, the organization of education mainly in small groups implies the abandonment of the "teacher-learner" dialogue and the transition to a three-way interaction in the form of "teacher-group-learner". The class is divided into small groups that interact with each other, and each of them independently masters the learning material, which creates the basis for a strong connection between the teacher and the pupils. There is a sense of teamwork among the pupils. In group work, pupils participate together with their peers. They discuss together the opinions expressed by others. To learn to understand ideas, pupils learn to listen to each other attentively. They ask each other questions and get used to helping each other. Pupils feel more relaxed while working in a group.

The results of the experiment showed that in the lessons organized according to the proposed methodology, pupils have a tendency to think critically and express their views openly. This was manifested in the following:

1. Pupils are accustomed to making important decisions on the issue they are discussing.
2. In the process of working in small groups, the opportunities and aspects of each pupil were revealed.

As the experimental research was conducted in several stages, it was possible to comprehensively study the individual psychological characteristics of pupils, in particular, their understanding of the didactic materials presented in the disciplines, their mastery and motivational scope.

The level of formation of critical thinking skills of primary school pupils was determined using didactic tasks.

It was didactically substantiated that in the process of mastering each subject, it is possible to create a system of formation of critical thinking of pupils with the help of simple didactic tasks.

Innovative methods were also used effectively during the experiments. Efforts were made to create an integrated pedagogical system based on teacher-pupil collaboration.

It is advisable to use innovative methods common in pedagogy to form critical thinking in pupils. One of them is the indicators of critical

thinking formed of pupils of grades 3-4 by the method of "Brainstorming" ("Brainstorming"):

Breishntorming is a method of generating ideas. Elementary pupils work in small groups to solve a difficult problem: they put forward (generate) their own ideas to solve it. It encourages participants to use their imagination and perspectives.

The task of the "brainstorming" is to create new ideas with the help of small groups. This method encourages problem-solving pupils to think more independently and even come up with fantastic ideas. For example, when the topic of the 3rd grade textbook "A man who lived as my people, my country" was discussed, pupils worked in small groups to reflect on the selfless work developed by Amir Temur for the development of the country and to prove that the great master lived for the Motherland. Any ideas and opinions expressed by pupils were taken into account. An opportunity was created to supplement and further expand the ideas and opinions expressed. This method performs all didactic functions, but its main task is to encourage independent understanding and solution of the problem and to motivate learners. See the table below.

**Technological map of the method of "mental attack" used in the formation of critical thinking**

| Steps and the content                          | Activity  |   |
|--|---|---|
|  | Teacher   | Pupil   |
| 1- Step Preparing pupils for critical thinking | Defines the topic, goals and results, defines the criteria for their evaluation             |   |
| Step 2 Introduction to Critical Thinking       | Announces the purpose, outcome, and evaluation criteria of the topic.                       |   |
| Step 3<br>2- Expressing independent opinions   | Achieves the goal of encouraging pupils to think critically using the brainstorming method. | Pupils try to show ways to solve the problem, make suggestions about it           |
| 1- Step 4<br>Analysis of ideas                 | Explains a given problem and encourages pupils to think critically                          | The ideas expressed are analyzed as a group. True, they identify objective points |

|   |  |   |
|---|--|---|
| <p>Step 5<br/>Completion,<br/>analysis and<br/>evaluation</p> | <p>Critical thinking performed by pupils summarizes the activity, analyzes and evaluates their thoughts.</p> | <p>of view.<br/>Pupils analyze and evaluate the ideas expressed by themselves, their classmates and their groupmates.</p> |
|---|--|---|

The Pinboard method is also effective in shaping critical thinking in primary school pupils, teaching pupils to express themselves systematically and logically. (Pinboard method - (English "pin" - "reinforcement", "board")). The importance of this method of teaching in the formation of critical thinking is that the discussion or learning conversation is associated with practical methods. facilitates development and upbringing. Pupils develop the ability to communicate and discuss, express their ideas orally and in writing, and think consistently.

Our experiments have clearly shown that the innovative methods used to effectively form the critical thinking skills of primary school pupils during the experimental work have the following advantages:

- First: to suggest problematic situations to pupils at the beginning of the lesson or to give special problem-solving tasks that can express the topic within the subject;
- Secondly, to allow the pupil to overcome difficulties and think independently through problematic situations;
- Third, to instill of pupils a tendency to think critically;
- Fourth, encourage pupils to think independently, to draw correct, objective conclusions;
- fifth, to prepare pupils to find solutions to complex situations.

Thus, experimental results have clearly shown that the use of various interactive methods in the formation of critical thinking skills in primary school pupils gives effective results.

In order to determine the level of comprehensibility of the educational tasks provided to pupils during the study, their age

characteristics, levels of mastery, opportunities for independent thinking, the sequence of topics in the curriculum were taken into account.

In order to diagnose the formation of pupils' critical thinking level, diagnostic tests such as Wexler's famous IQ- "intelligence diagnosis", Gilford's S- "Standardized scales", Amthauer's Z- "Interest assessment" were used.

Scientifically based methodological recommendations have been developed to determine the level of critical thinking of primary school pupils, and the study of the main problems of measurement and scaling necessary in the educational process has begun. In the process of teaching subjects, innovative methods were used to help primary school pupils to acquire interactive learning, aimed at increasing their interest in science, developing independence and activism, developing critical thinking.

It should be noted that during the experimental work, the coefficient of memory of pupils in the control and experimental group was calculated according to the method of B. Sosnovsky. The pupils in both groups read 30 words that express the concepts of independence, equality, goodness, wisdom, country, peace, country, sunshine, images, labor, glory, cotton, wealth, gold, income, humanity. It was explained to the pupils that the words should be read only once according to the terms of the assignment. The purpose for which the assignment was presented was kept secret from the pupils. After the teacher had read all the words, she instructed the pupils to close their notebooks, recall the words they had read, and write them down on a separate sheet of paper.

**Table 1**

**Level of formation of critical thinking in primary school pupils (at the beginning of the experiment)**

| Groups |        | Experiment                                  | Control                                     |
|--------|--------|---|---|
| Marks  |        |   |   |
|        | High   | $K_1 = \frac{45}{152} \cdot 100\% = 29,6\%$ | $K_2 = \frac{43}{153} \cdot 100\% = 28,1\%$ |
|        | Middle | $K_1 = \frac{65}{152} \cdot 100\% = 42,8\%$ | $K_2 = \frac{64}{153} \cdot 100\% = 41,8\%$ |
|        | Low    | $K_1 = \frac{42}{152} \cdot 100\% = 27,6\%$ | $K_2 = \frac{46}{153} \cdot 100\% = 30,1\%$ |

**Table 2**

**The degree of formation of critical thinking in primary school pupils (at the end of the experiment)**

| Groups |        | Experiment                                  | Control                                     |
|--------|--------|---|---|
| Mark   |        |   |   |
|        | High   | $K_1 = \frac{79}{148} \cdot 100\% = 53,4\%$ | $K_2 = \frac{57}{153} \cdot 100\% = 37,3\%$ |
|        | Middle | $K_1 = \frac{44}{148} \cdot 100\% = 29,7\%$ | $K_2 = \frac{56}{153} \cdot 100\% = 36,6\%$ |
|        | Low    | $K_1 = \frac{25}{148} \cdot 100\% = 16,9\%$ | $K_2 = \frac{40}{153} \cdot 100\% = 26,1\%$ |

The obtained data were analyzed mathematically and statistically based on the Pupil-Fisher criterion.

Reliable intervals for performance and control class indicators from the results:

$$\begin{aligned} \bar{X} - t_\gamma \cdot \frac{D_m}{\sqrt{m}} \leq a_x \leq \bar{X} + t_\gamma \cdot \frac{D_m}{\sqrt{m}} & \quad \bar{Y} - t_\gamma \cdot \frac{D_n}{\sqrt{n}} \leq a_y \leq \bar{Y} + t_\gamma \cdot \frac{D_n}{\sqrt{n}} \\ 4,4 - 0,08 \leq a_x \leq 4,4 + 0,08 & \quad 4,1 - 0,09 \leq a_y \leq 4,1 + 0,09 \\ 4,32 \leq a_x \leq 4,48 & \quad 4,01 \leq a_y \leq 4,19 \end{aligned}$$

Hence, the mean score in the experimental group  $x = 0.05$  is higher than the mean score in the control group. Thus, the validity of the experiment is based on the results of the experimental work.

Quality indicators of experimental work:

$$K_{yc\delta} = \frac{(\bar{X} - \Delta_m)}{(\bar{Y} + \Delta_n)} = \frac{4,4 - 0,08}{4,1 + 0,09} = \frac{4,32}{4,19} = 1,03 > 1;$$

$$K_{\delta\delta\delta} = (\bar{X} - \Delta_m) - (\bar{Y} - \Delta_n) = (4,4 - 0,08) - (4,1 - 0,09) = 4,32 - 4,01 = 0,31 > 0;$$

From the results obtained, it was found that the criterion for assessing the effectiveness of teaching is greater than one, and the criterion for assessing the level of knowledge is greater than zero. Thus, the results of experimental work with pupils on the level of formation of critical thinking of primary school pupils of general secondary schools are highly effective.

Thus, the formation of critical thinking skills of primary school pupils was marked by an increase in the level of critical thinking of pupils in the groups who participated in the experimental work.

### Conclusion

In conclusion, we can say in today's globalized world, it is necessary to cultivate critical thinking of young people in the face of destructive ideas and in various guises aimed at disrupting the minds and spiritual world of people. If the pupil can think critically, he or she will have different ways of expressing himself or herself and feels confident when working with various information outside world and can adequately assess events as a person.

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