

Modern Education in Science, Values, and Technology

Turdiyev Shokhrux Razzakovich

Dean of the Faculty of Engineering and Pedagogy

Doctor of Pedagogical Sciences, (DSc), Professor

Karshi International University

D. O. Shokirova

Independent Researcher Karshi State University



Abstract

This article emphasizes that today's students are required not only to be specialists in their field, but also to possess broad knowledge — including historical, psychological, pedagogical, political, and economic literacy, as well as information management skills. The main goal of updating the content of education is to shape individuals who can think critically, are independent, cultured, well-rounded, and capable of expressing their thoughts freely.

Keywords: Education, technology, informatization, values, science, qualification, specialist.

Introduction

In the current modern educational process, improving the skills of teachers in the use of information and communication technologies has become a mandatory task. Providing students with information foundations, developing logical-structural thinking skills, and forming skills to use information technologies as a means of self-development and its implementation is the main requirement today.

Currently, computers and interactive whiteboards have become much more established as didactic and educational tools. Therefore, multimedia electronic learning tools are used in any educational field for teaching all subjects. Compared to the blackboard and computer projector in our previous tradition, the interactive whiteboard has become an opportunity to expand the content of the lesson. To achieve success in using the interactive whiteboard, we only need to competently plan the lesson and properly prepare the necessary materials.

The main task of the education system is to introduce new teaching technologies, informatize education, access to international communication networks, and create the necessary conditions for education aimed at the formation, development and improvement of the individual's skills based on national and universal values, achievements of science and practice. " Consequently,

modern teachers are required not only to be deep specialists in their subject, but also to have historical, cognitive, pedagogical and psychological literacy, political and economic knowledge, and to work with information. The scientific and pedagogical basis for updating the content of education is to form a student as a subject of educational and cognitive activity, educated from different perspectives, well-rounded, able to express his opinion correctly and skillfully, cultured and comprehensively developed, capable of critical thinking. Critical thinking is the most important pedagogical concept today and is of great importance for the development of education. This module is aimed at developing critical thinking skills in both students and teachers in a conscious and thoughtful manner. Teachers working in the field of critical thinking need to listen patiently to others and take their own views responsibly in order to effectively exchange ideas. Special attention is paid to the development of the most necessary qualities. Thus, teachers can bring the teaching process much closer to life. Effective, systematic use of teaching methods in mastering a subject clearly gives its effect.

Each lesson of a teacher should be a source of knowledge and education. The term “critical” used in the phrase “critical thinking” means focusing one’s thoughts in the process of solving a problem or issue. In this sense, the word “critical” does not mean “control” or “denial”. Critical thinking occurs in all situations that occur in the process of reasoning, drawing conclusions, or solving a problem, that is, when it is necessary to determine what to believe, what to do and how to do it, and in a thoughtful way. Critical thinking involves discussing important issues and reflecting on experience. Since teachers have a pedagogical education and are subjects of additional education and self-improvement, these skills are formed and applied in practice.

As we know, a modern lesson is a dialogue, a unity of scientific-pedagogical and practical activities, in which students are sought, prepared, mastered and the future is predicted.

Critical thinking includes the following:

Firstly, critical thinking is independent and individual thinking. If the lesson is based on the principles of critical thinking, students form their own opinions, judgments, and assessments independently of each other. At the same time, thinking is considered critical thinking only when it has its own character. Students should be given sufficient freedom to work independently and solve the most difficult problems themselves. In critical thinking, the idea does not have to be unique: one student has the full right to accept the idea and belief of another student as his own. He is even obliged to agree with the opinion of another student, which proves that the student is right. However, in most cases, a student who thinks critically often cannot agree with the opinions of other students.

Secondly, the information that students receive is not the end, but the starting point of critical thinking. Knowledge creates evidence, without which a student cannot think critically.

It is generally understood that a student without knowledge and information has no idea. For deep thinking, facts and ideas, texts and theories, data and concepts must be sufficient. The teacher's work should not be limited to teaching critical thinking. We need to teach our students to accept the most difficult concepts and retain various information in memory. Teaching critical thinking is part of the teacher's comprehensive work. Critical thinking can be practiced at any age.

Of course, students' thinking skills improve during their studies, but each of us, including students and teachers, leads to the creation of new things through our cognitive activity and critical

thinking. Only thanks to critical thinking does the traditional cognitive process acquire an individual character, become qualitatively continuous and effective.

Third, critical thinking begins with asking questions and identifying a problem to be solved. In general, a person is naturally curious, when he notices something new, he seeks to know what it is, and when he sees something interesting, he wants to get into it.¹

Fourth, critical thinking is characterized by the search for reliable evidence. That is, a critical thinker seeks his own unique way to solve a problem and tries to justify these solutions with sound, high-quality evidence. At the same time, he recognizes that there are other ways to solve a problem and tries to prove that his chosen path is more rational than others. These include:

- identifying problems and identifying realistic means of solving them;
- understanding the importance of priorities, hierarchy, and sequence in solving problems;
- collecting relevant information;
- determining contextual conditions and priorities;
- understanding and applying them with clarity, clarity, and objectivity;
- interpreting data to evaluate evidence and arguments;
- being able to draw conclusions and recommendations;
- analyzing the conclusions and recommendations obtained;
- introducing a preliminary model of his position into the system of experimental results obtained;
- to form a balanced opinion about certain events and others from the perspective of everyday real life, and others.

The idea that critical thinking is a technology involves discussing important issues and reflecting on experience.

Critical thinking is a method used to understand, evaluate, analyze and synthesize information obtained as a result of observation, experimentation, reflection and thinking, which can serve as a basis and motivation for action.

Critical thinking often involves the willingness to imagine something, make alternative decisions, implement new or modified ways of thinking and acting, which implies the desire to engage in organized social activity and encourage others to think critically.

At the initial stage, the process of critical thinking includes:

- collecting relevant information;
- critically analyzing and evaluating evidence;
- making sound decisions and drawing conclusions;
- revising assumptions and recommendations based on extensive experience.

The foundations of critical thinking can be developed from the earliest stages of education to develop the necessary skills. The best way to do this is to encourage students to pay attention to evidence in their own experiences.

Critical thinking involves developing skills such as gathering evidence through observation and listening, taking context into account, and using appropriate criteria to make decisions. Therefore, students should be given opportunities to develop the skills of observation, analysis, inference, and interpretation.

¹ Turdiyev S.R. Didactic principles of guiding theoretical knowledge from steam science into practice //ACADEMICIA: An International Multidisciplinary Research Journal. – 2021. – T. 11. – №. 10. – S. 1597-1601.

For example, when studying a problem, students can be encouraged to:

- the main goal of studying the problem is to develop and form students' communicative competence;
- to teach practical mastery;
- to evaluate primary sources and ask relevant questions about them;
- to compare and discuss primary sources, draw conclusions and preliminary conclusions;
- to revise predictions and recommendations based on broader experience, etc.

In modern pedagogical science, reflective education involves students' critical thinking about what they have learned. For this, it is necessary to study, record and evaluate the critical thinking skills they have demonstrated. These abilities and skills are manifested in the process of teaching the problem, in the process of performing tasks that require discussing and considering specific arguments. As a result, the following reflections are carried out among students:

- the basis for active creative thinking is created;
- the ability to communicate freely with the teacher, exchange ideas is formed;
- respect for each other; the basis for listening to each other's opinions is created;
- the path to self-knowledge as a person opens; self-assessment and mutual assessment skills are formed.

In conclusion, it can be said that as a result of using critical thinking technology, the student's abilities are activated and a knowledge paradigm is formed. Critical study of a specific topic, thinking, describing, remembering and predicting leads the student to a state of discovering new knowledge. This stimulates further thinking. If in previously used teaching methods the teacher occupied the main place and the student was only a listener, then thanks to modern critical thinking the student is enriched with the foundations of knowledge and strives to think about the future. Therefore, critical thinking is a very complex and important phenomenon.

References

1. Ro'zieva D., Usmonboeva M., Holiqova Z. Interfaol metodlar: mohiyati va qo'llanilishi / Metedik qo'llanma. – T.: Nizomiy nomli DTPU, 2013. – 115 b.
2. Muslimov N.A., Usmonboeva M.H., Sayfurov D.M., To'raev A.B. Innovatsion ta'lim texnologiyalari/ Darslik – T.: "Sano standart" nashriyoti, 2015.
3. Turdiyev S.R. Didactic principles of guiding theoretical knowledge from steam science into practice //ACADEMICIA: An International Multidisciplinary Research Journal. – 2021. – T. 11. – №. 10. – S. 1597-1601.
4. Turdiev, Sh.R. (2019). TA'LIM JARAYONINI TIZIMLI YO'NDASHUV ASOSIDA PEDAGOGIK TEXNOLOGIYALARDAN FOYDALANGAN HOLDA TASHKIL ETISH. *Sovremennoe obrazovanie (Uzbekistan)*, (12 (85)), 31-36.
5. Turdiyev, SH.R. "MODELLAR XARAKTERI VA MODELLASHTIRISH JARAYONLARINING TARKIBIY QISMLARI." *E Conference Zone*. 2022.
6. Razzoqovich, T.S., & Uktamovich, S. A. (2021). IMPROVING THE LEARNING PROCESS AND INFORMATION LEARNING SPACE USING GOOGLE'S CLOUD SERVICES International conference on multidisciplinary research and innovativ.
7. Turdiev Sh.R., Keldiyarova M.G. Organizatsiya v protsesse obucheniya uchebno-issledovatel'skoy raboty studentov //Vestnik nauki i obrazovaniya. – 2020. – №. 5-2 (83). – S. 21-25.