FORMATIVE ASSESSMENT OF STUDENTS’ KNOWLEDGE – AS A MEANS OF IMPROVING THE QUALITY OF EDUCATION

Dilova Nargiza Gaybullaevna
associate professor of the department of Primary education, doctor of philosophy in pedagogy (PhD), BSU, Nargiza.dilova@mail.ru

Abstract:
Introduction. Regular assessment of the level of knowledge of students, the process of mastering educational information is one of the important factors that ensure the interconnectedness and harmony of education and upbringing. Formative assessment can be used as an effective tool in the successful implementation of this process. In this article, the experience of developed countries in the formative assessment of school students' knowledge, the results of scientific research of scientists in the field of pedagogy were analyzed and the main conditions for the application of this practice in the context of the Republic of Uzbekistan have been identified.

Methods. The analysis of the above research has shown that the student knowledge assessment system includes a number of common components. Such components include the collection and analysis of data in the educational process, a reasonable conclusion on the level of formation of skills and abilities, as well as the ability to apply these knowledge, skills and abilities in practice.

Results. Diagnostic, formative and summative assessment methods have special functions in the acquisition of knowledge by students. The application of diagnostic, formative and summative assessment methods in school practice in a certain sequence and sequence serves as an important tool for the formation of a stable need for self-assessment, self-monitoring of learning and independent learning.

Discussions. Student feedback and responses can also be in oral or written, formal or informal forms. The most important thing is to continuously assess students' knowledge in the current learning process, to pay more attention to underdeveloped information, to ensure the effectiveness of the next stages of learning through repetition. At this stage, constant feedback is important, and the student develops the need for self-assessment and self-monitoring of their learning activities - learning motivation.

Conclusion. Assessment of students' knowledge can be in methods such as written test, control work, interview or assignment. It can be recorded in writing, using photographs or other visual aids or audio recording. Regardless of the environment in which the assessment is conducted, it must be successful. It is important for teachers and students to know what their goal is.

Keywords: criteria of assessment, diagnostic assessment, formative assessment, factors of formative assessment, summative assessment, quality of education.
**Introduction.** The further development of the educational and scientific spheres in the new development period of the Republic of Uzbekistan, the achievement of its competitiveness with the countries that are ahead in the development of all spheres of the world today, is associated with the quality and efficiency of the knowledge given to young people. To achieve this result, it is necessary to train a new generation of personnel who have strategic thinking, are educated and skilled. Because "where there is no knowledge, there will be backwardness, ignorance and, of course, error from the right path."[1]

Over the past three years, all stages of the education system in Uzbekistan are being rapidly reformed. Training of a new generation of high intellectual and spiritual potential, capable of coming up with new initiatives and ideas for the development of the country, the formation of the necessary knowledge and skills, along with the knowledge of students in science, their literacy, basic and scientific competencies and the introduction of a new system for assessing personal qualities. [3]

Acquisition of modern knowledge, true enlightenment and high culture should become a vital need of every citizen. It is important for us to bring up young people as "independent-minded, modern people with modern knowledge and skills, with a strong life position, truly patriotic people." [3]

The criteria set out in the innovative assessment of students' knowledge acquisition are defined as progress that creates the ability to determine the compatibility between academic achievement and potential levels. The assessment criteria are aimed at selecting students' educational achievements, as well as providing information about their level of competence.

Regardless of the assessment system, its main task is to determine the process of formation and development of knowledge, skills, competencies, life and science competencies in the student. Assessment is a means of interaction between the student and the teacher that helps to determine the process of mastering the learning materials and the level of mastery. Approaching the issue of assessing students' knowledge as a simple "dry" technical tool reduces the objectivity of the assessment results.

One of the most important issues facing educators, scientists and teachers today is to provide modern education to a new generation that will replace us, with their own ideas, worldviews, modern knowledge and thinking. However, "modern education" means not directly copying curricula and science programs from developed countries, but adapting them to the national traditions, values and customs of our people. Because education cannot be imagined in isolation from upbringing. To do this, they need to find answers to a number of questions "What method should be used to test students' knowledge in order to deepen their knowledge of the lesson?", "Which materials on the topic are difficult for students to master?", "What additions, changes or corrections should teachers make to the forms and methods of teaching so that students can master the knowledge effectively?".

Addressing the above issues at the national level - in order to raise the quality of education in schools to a new level in line with international standards Decree of the President of the Republic of Uzbekistan dated April 29, 2019 No PF-5712 "On approval of the Concept of development of the public education system of the..."
Republic of Uzbekistan until 2030" was published. This decree defines in detail the tasks to be performed in the education system, which is the main link in the formation of human capital, and ways to implement them. Therefore, improving the quality of education in schools of the country is an important didactic problem today.

**Literature review.** Formative assessment of students' mastery of academic knowledge has been used for many years in developed countries such as the United States, England, Scotland, Sweden, and later in Russia. It has been proved in practice that following such a sequence in the assessment of students' knowledge at school will help to improve the quality of education at the level of modern requirements. In recent years, in Kazakhstan and Kyrgyzstan, special attention has been paid to the advantages of this assessment method and its introduction into school practice.

According to R.E. Mashkova, in essence, formative assessment is a process of goal-oriented, continuous monitoring of student learning, aimed at providing feedback to ensure self-assessment on the criteria. Formative assessment is “informal” and the student is not assessed in the class journal. That is, the formative assessment method does not assess a student’s mastery level in each lesson in numbers or scores. Perhaps, through regular monitoring, the student will be directed to self-assessment, self-monitoring of their learning activities. [13]

Catarina Andersson explored the impact of formative assessment on teacher classroom practice and student mastery. The researcher noted that when using this method of assessment, the teacher's creative approach to teaching and practical training has a positive effect on students' knowledge of mathematics. In addition, the effectiveness of the formative assessment method depends not only on the teacher, but also on the development of students' skills in its use. [4]

Endorsing the researcher’s view, we believe that a science teacher should be aware of their character traits, psychophysiological and intellectual characteristics, knowledge acquisition mechanisms, thinking strategies, and leading representative systems before formatively assessing students in the classroom. This is because the process of acquiring knowledge by students differs in their age, the speed of receiving and processing information, the specifics of the strategy of thinking, which is confirmed in the scientific research of D.R. Gulyamov. [9, P.40-41]

Ian Clark, in his research project on the formation of formative assessment strategies in UK schools, acknowledged that the development of communication between teacher and student and student in the classroom will ensure that their learning activities are effective in the learning process. Ian Clark emphasizes the need for teachers to achieve a change in students' attitudes toward learning activities as a key aspect of the formative assessment method:

1) students understand what they want to learn and what is required of them before the topic is covered;

2) promptly receive information from the teacher about the quality of their work and what can be done to better perform the learning tasks, ie the presence of rapid "feedback";

3) get advice on what students need to do to maintain an effective learning process;
4) students are ready to make decisions on their next steps to complete the learning tasks;
5) students know who can help them and have the opportunity to apply if necessary;
6) be able to involve parents and guardians in the educational process;
7) have the ability to gather relevant information as a student and be very eager to learn;
8) students take responsibility for their education and spend most of their time in the learning process. [5]

The above qualities are mainly referred to in the pedagogical-psychological literature as "the formation of learning motivation in the student."

David J. Nicola and Debra Macfarlane-Dick have scientifically explored the relationship between formative assessment and students' self-management of the knowledge acquisition process. Special attention was paid to the importance of "feedback". Researchers have found that the process of acquiring knowledge can help students control themselves and manage themselves independently. They believe that the role of feedback in formative assessment is to have an active character rather than a reactive one that occurs immediately after the teacher’s influence. This approach has been used by experts to identify seven principles that determine how feedback governs a student’s learning activities. [6]

Researchers B.D. Nygmetova and N.S. Sarbasov, who studied the essence of criteria-based assessment of students' knowledge in an innovative educational environment at school, also confirmed that the mental development of students and increased motivation to learn are associated with assessment criteria and constant "feedback". [15]

M.R. Gozalova, T.I. Spatar-Kozachenko and E.S. Loseva believe that the assessment of students' knowledge in the educational process should not be a random "novelty" for them. The researchers found that all situations were related to the following three factors when assessing students' knowledge:

1) transparent goals;
2) to achieve the goal jointly;
3) conscious acceptance of educational information by the student.

In order to ensure the positive impact of these factors, teachers consider it appropriate to develop forms of assessment in collaboration, and discuss the results not only among the teaching staff of the school, but also in joint conferences with teachers and scientists. [8]

In V.Yu. Dyadechko's research work on improving the practical pedagogical activity of teachers through the use of formative assessment strategies, formative assessment is considered as an element of effective teaching through the organization of modern lessons. The research recognizes the importance of reflection on the learning process in question-answer, discussion, and student self-assessment, and found that the improvement of a teacher's practice is interrelated with the solution of formative assessment problems. [11]

While studying the essence of criteria-based assessment technology, Yu.A. Pavperova emphasizes that all types of activities of students are carried out on
the basis of assessment criteria. The researcher emphasizes the importance of these criteria to be understandable to all participants in the learning process - students, teachers and parents, and the correct implementation of this condition will serve to ensure a positive result of formative assessment. [17]

V.X. Mansurova's research is devoted to the problem of assessing students' knowledge in the global educational environment and the essence of formative (formative) assessment, the researcher focused on the positive experience of British scientists in the implementation of formative assessment in practice - formative assessment as an integral part of the criteria-based assessment. [12]

We believe that such an approach to the issue will improve students’ knowledge acquisition activities.

Ways of formative assessment of students' knowledge and the peculiarities of the activities of teachers and students were also studied by AA Medjidova, then it is necessary to clearly define the direction of interaction with students, which, in turn, helps to form in students a valuable relationship with the learning process. [14]

A.S. Yusupova and L.V. Obydenkina emphasized the role of formative assessment as an important factor in improving the effectiveness of education in the modern school. Scientists concluded that the presence of effective “feedback” with students as key components of formative assessment technology; increased cognitive activity of students, the opportunity to make adjustments to the educational process based on the results of the assessment, the responsibility for the learning outcome should be divided equally among all participants in this process. [19]

Some aspects of the application of the method of formative assessment by experienced teachers in the teaching of social sciences and humanities studied by Bychkova S.A., Radevich L.V. and Surina E.A. They analyze the best practices of Russian language teachers in general secondary schools in order to determine the criteria for assessment in the teaching of social sciences and humanities, and consider that conditional symbols, special terms, systematization are an integral part of assessment criteria. [7]

S.A. Odintsova, S.K. Abildina and A.M. Beisenbaeva in their research analyzed the issues of interaction between the subjects of the educational process. They conclude that the interaction of the subjects of the educational process, that is, the success of the "feedback" depends on the correct definition of the evaluation criteria. [16]

Mashkova R.E. has explored the possibilities of formative assessment in foreign language teaching, noting that in many cases formative assessment can be conducted anonymously without assessing the class journal. The researcher recommends preparing a class map based on the teacher’s observations before applying formative assessment. [13]
Determining the level of mastery of students on the basis of 5-point assessment criteria.
(In the example of studying a particular text)

<table>
<thead>
<tr>
<th>The level of students’ knowledge</th>
<th>Vocabulary</th>
<th>Grammar</th>
<th>Reading</th>
<th>Listening</th>
<th>Penmanship</th>
<th>Speaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students name</td>
<td>5 point</td>
<td>5 point</td>
<td>5 point</td>
<td>5 point</td>
<td>5 point</td>
<td>5 point</td>
</tr>
<tr>
<td>Karimova Karima</td>
<td>3 point</td>
<td>3 point</td>
<td>4 point</td>
<td>3 point</td>
<td>4 point</td>
<td>3 point</td>
</tr>
<tr>
<td>Salimov Salim</td>
<td>4 point</td>
<td>4 point</td>
<td>5 point</td>
<td>4 point</td>
<td>4 point</td>
<td>4 point</td>
</tr>
</tbody>
</table>

This proposed map allows a diagnostic assessment of the initial level of competence of students - to differentiate their level of knowledge on the basis of predetermined criteria.

According to the results of the study of the topic from students you can ask them to answer questions such as:
- "Did I achieve good results in studying the topic?";
- "Why did it happen?";
- "What did I not understand?";
- "Have I taken any measures to clarify the information that I do not understand?";
- "What tool will help me to study this topic?";
- "What did I learn on the topic and what words mean?"

After that, the student is invited to self-assess on mastering the learning topic.

[13]

It is in this process that the teacher should also analyze the gaps that have arisen and work on the following questions and are required to answer questions such as:
- "Did I am satisfied with the result of the topic?";
- "Which method did the students choose to help them master the topic or did I use it incorrectly?"
- "Which method will I use to master this topic?"
- "Did I allocate time correctly during the lesson?"
- In what process was the interest of students most expressed?
- "Did the students like working in groups, did I pay special attention to individual relationships?"
- "Was I able to convey the meaning of new words and concepts on the topic to students?"
- "Did I correctly assess the process of mastering the topic?"
- "What new knowledge do I need to equip myself to teach this topic to students and ensure their mastery?".

In the sequence of the lesson and its outcome, not only the student but also the teacher will need to critically analyze and self-assess their performance.

Because education today should be based on the formation of the following skills:
1. Collaborative activities aimed at solving real problems
2. Creativity and innovation
3. Critical thinking and problem solving
4. Communicability
So far, the agenda of modern education is:

- Equipping students with 21st century skills;
- Ability to absorb flexible content in the acquisition of knowledge;
- Targeted use of tools and interactive methods to ensure the development of knowledge, skills and abilities of students, the formation of scientific and basic competencies in them;
- To be able to formatively assess the level of mastery of students on the basis of modern requirements;
- In achieving the quality of education in the classroom, there are tasks such as constantly acquiring new knowledge and its purposeful application.

**Research Methodology.** In school practice, various assessment systems, criteria and forms have been used to improve and determine the quality of the learning process in students.

Assessment of students' knowledge on the basis of international assessment programs is aimed at ensuring that they have a high level of thinking skills through the targeted use of modern methods of teaching and learning, and encourages them to go beyond thinking, creative, effective and conscious thinking.

It shows that **three interrelated types of assessment** of students' knowledge - diagnostic, formative and summative - are used. Each of these methods has its own place and role in the system of assessment of students' knowledge and the quality of education in the institution.

**Diagnostic assessment** allows to determine the initial level of competence of students. In most cases, the results of the diagnostic assessment are not recorded in the class journal. Diagnostic assessment is applied to a student who has just arrived in the classroom, at the beginning of the quarter and the beginning of the school year, before starting work with a new class, or before starting to study a section or chapter in the textbook. This method of assessment allows to determine the existing levels of knowledge of students and the neuro-pedagogical relief of the educational environment, to make the necessary adjustments and changes to the subject and calendar-thematic plans of the subject based on their needs. This, in turn, can be used to anticipate and overcome difficulties that may arise in the process of teaching and learning. The results of the diagnostic assessment ensure the most effective application of formative assessment.

**Formative assessment** is an assessment in the process of teaching, observation, analysis of student achievement in learning activities, in which the teacher makes adjustments to the teaching process without assessment. Due to the fact that this method is constantly used in the classroom, it allows you to monitor the dynamics of students' learning and, if necessary, make adjustments to the course and the curriculum. Student feedback and responses can also be in oral or written, formal or informal forms. The most important thing is to continuously assess students' knowledge in the current learning process, to pay more attention to underdeveloped information, to ensure the effectiveness of the next stages of learning through repetition. At this stage, constant feedback is important, and the student develops the need for self-assessment and self-monitoring of their learning activities - learning motivation.
The quality of formative assessment in the process of educating students affects the outcome of summative assessment. Formative and summative assessment methods are widely used in the process of knowledge acquisition and in determining the quality of education.

**Summative assessment** is the final assessment, which is used to assess the level of mastery of educational information by students in the study of the subject and section of the study, the assessment of mastery at the end of the quarter and academic year. This assessment method helps students gain information about what they have learned during their learning activities.

To organize the process of assessing students' academic achievement on the basis of criteria, taking into account the psychological and pedagogical characteristics of their learning activities, namely:
- The student is ready to improve their knowledge, skills and abilities in the performance of independent tasks and to seek new achievements;
- Be able to accurately assess their own success;
- Understand the tasks;
- The desire of the student to choose and organize the direction of personal learning;
- Striving for reading and independent preparation, active reading and learning in the classroom;
- Striving to communicate with classmates;
- Pay attention to the level of knowledge of peers, that is, strive for mutual evaluation;
- Formation of theoretical and critical thinking;
- Stability of motivation in the process of receiving information;
- Must be aimed at a goal.

Features of summative assessment used to determine the level of success of students:
- allow students to identify their strengths and weaknesses and address them as needed;
- to evaluate their own achievements according to the student;
- to achieve target standards for students;
- helps to guide students to gain in-depth knowledge or expend a lot of effort to achieve target standards.

**Analysis and results.** The concept of "formative assessment", based on its content and essence, can be defined as follows:

*Formative assessment is* - an innovative method used by the teacher to correct the learning process and make systematic additions to it in order to achieve the learning objectives based on the information received through written or oral feedback with students in order to constantly determine the level of mastery in the teaching (lesson) process and to form a positive internal learning motivation. [20]
In order to properly use the method of formative assessment in the process of educating students in school practice, the teacher must know the specifics of this method, be able to distinguish it from other methods, be able to divide this method into components, apply it in the classroom, have the skills to establish constant feedback, make the necessary adjustments and changes to the calendar-thematic plan of the subject on the basis of recording the results of the assessment, the correct formation and development of social relations with the subjects of the educational process.

Diagnostic, formative and summative assessment methods have special functions in the acquisition of knowledge by students. The application of diagnostic, formative and summative assessment methods in school practice in a certain sequence and sequence serves as an important tool for the formation of a stable need for self-assessment, self-monitoring of learning and independent learning.

The purpose of the diagnostic analysis of the level of mastery of students during the lesson:
• Identify a clear and unambiguous situation about the process, develop and implement a plan and measures to fill the gaps based on the identified needs, provide prompt quality tutoring assistance
• This will require the teacher's professional competence, such as organization, management, pedagogical skills, ICT literacy.

The pedagogical skills of the teacher in the formation of life skills (competencies) in students include:
➢ educational approaches aimed at the formation of competencies in the process of achieving knowledge acquisition;
➢ strategies and technologies;
➢ be able to introduce methods and tools for assessing the level of skills development.

The main purpose of today's education is to form in students the skills of the XI century, the content of the formation of life skills in the educational process:
• Preparing them for life;
• Provide a foundation for successful future professional and employment activities;
• Compliance with the requirements of the principles of DTS based on a competency approach;
• Learners need efficiency, a high level of thinking (“critical thinking”), problem solving, research, teamwork, flexibility, communication, listening to others, decision making, collaboration, problem solving, critical information to form and develop skills such as the ability to analyze, to determine the direction of their education, to demonstrate their knowledge.

Conclusion/Recommendations. Diagnostic, formative, and summative assessment methods should be used in a specific sequence to assess student knowledge. Otherwise, ignoring one of them can lead to a decrease in the student's need for self-monitoring of learning activities and independent learning.
The formative assessment method provides a guaranteed opportunity for the student to gradually master the subsequent knowledge in order to self-assess and achieve the learning objectives through self-monitoring of learning activities.

We believe that in order to increase the effectiveness of learning and assess the knowledge of students in schools, it is advisable to take into account the following suggestions for the proper use of this innovative method:
- the use of diagnostic, formative and summative assessment methods in a certain sequence in the assessment of students' knowledge;
- the presence of constant "feedback" between teacher and student;
- ensuring the transparency of learning objectives in the application of each assessment method;
- the teacher should constantly analyze their activities, plan rationally, and then clearly define the direction of joint activities with students;
- joint achievement of goals by teachers and students;
- relying on the student's conscious acceptance of educational information;
- to consider formative assessment as an integral part of criteria-based assessment in the assessment of students' knowledge, to pay special attention to mutual and self-assessment of students and assessment criteria;
- differentiation of development criteria for the objective determination of the level of knowledge acquisition, taking into account the age and developmental level of students and the specifics of the subject;
- students and their parents should be aware of the assessment criteria for the subjects.
- clarity of assessment criteria for all participants in the learning process. [21]

Principles of the system of criteria for assessing the level of knowledge:
1. Student learning achievement and summative assessment;
2. Direct correlation between learning objectives and expected outcomes.

Assessment of student achievement should be clear, objective, and transparent, as assessment requires clear, reliable information. These requirements include:
- Criteria and tools are focused on learning objectives and expected outcomes;
- Accuracy and universality of assessment;
- Increased interest and responsibility of all participants in the learning process;
- Provide opportunities for systematic monitoring of student progress;
- Development-oriented;
- The success of students in achieving the expected results in learning activities and the processes of their formation should be evaluated, not individual characteristics;
- Algorithm of assessment results and norms, section and quarterly summative assessment (BJB and CHJB) results should be known in advance to teachers and students;
- Assessment is structured in such a way that students are able to master self-assessment skills and participate in assessment services.

Assessment of students' knowledge can be in methods such as written test, control work, interview or assignment. It can be recorded in writing, using
photographs or other visual aids or audio recording. Regardless of the environment in which the assessment is conducted, it must be successful. It is important for teachers and students to know what their goal is. Teachers’ critical thinking includes critical evaluation of their own work experience, the use of new methods, and assessment activities. In the process of preparing the next generation to be able to participate in the life of a rapidly changing society, it is important that the teacher has professional competence, effective use of methods of updated educational content. It is therefore clear that teachers who focus more on practice will continue to work on themselves in the service process.

Taking into account these suggestions, the application of the method of formative assessment in school practice improves the quality of education and helps to form in students the desire to learn as much as possible, the need to learn and positive inner motivation.

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