

**UDC 371.3**

**CRITERIA-BASED ASSESSMENT AS A METHOD OF QUALITATIVE DEVELOPMENT OF TEACHING AND LEARNING PROCESS**

**Davletkaliyeva Y.S.**

*Branch of JSC "National Centre of professional development "Orleu" Institute for professional development of teachers for Aktobe region, Aktobe, Kazakhstan  
(000030, Aktobe, Turgenev str., 86), e-mail: [liza\\_davletkali@mail.ru](mailto:liza_davletkali@mail.ru)*

**Muldasheva B. K.**

*Chromtau Mining and Technical College, Chromtau, Kazakhstan  
(Chromtau, 030000, Abai s. 4), e-mail: [bagdash\\_PL@mail.ru](mailto:bagdash_PL@mail.ru)*

**Izteleuova Z.S.**

*Branch of JSC "National Centre of professional development "Orleu" Institute for professional development of teachers for Aktobe region, Aktobe, Kazakhstan  
(000030, Aktobe, Turgenev str., 86), e-mail: [zulfia-88.i.s@mail.ru](mailto:zulfia-88.i.s@mail.ru)*

**Kulbaeva B.S.**

*Aktobe University named after. S. Baishev, Aktobe, Kazakhstan  
(030000 Brs. Zhubanovyyh str., 302a), e-mail: [kulbaeva-1972@mail.ru](mailto:kulbaeva-1972@mail.ru)*

**Satova D.E.**

*Construction assembly college, Aktobe, Kazakhstan  
(000030, Aktobe, Aznauryz str., 5), e-mail: [Dinara\\_Kalib@mail.ru](mailto:Dinara_Kalib@mail.ru)*

**Resume**

This article presents data based on the results of academic and teaching research, the goal of which is the development and practical testing of criteria-based assessment, contributing to the improvement of teaching and learning processes in school. The subject of the research is the content and organization of criteria-based assessment. We have used theoretical and empirical research methods.

In the course of research have been developed: the criteria for of educational achievements of students on the subject of chemistry, recommendations have been made for teachers in preparation of assessment criteria and carrying out of self- reflection as feedback, conclusions about the significance of criteria-based assessment for teaching and learning have been made. Results of research can be used in educational practice of comprehensive secondary school, in the system of teachers' professional development. As a result of research conducted, it has been found out that criteria-based assessment allows effectively impact on the development of teaching and learning process. This is reflected in the change of the nature and content of teacher's and student's activity in class. The teacher is involved in the process of assessment development from the moment of goal setting until getting the result, the ability to help students in the achievement of results is developed. The student learns to reliably estimate, motivation for learning is increased, cognitive interest and communication skills are developed, self-esteem is raised and consequently the quality of knowledge is improved.

**Key words:** criteria-based assessment, teaching, training, quality of education, criterions, descriptors, grade.

**Introduction.** At the beginning of the XXI century in line with the general process of modernization of Kazakhstan education not surprisingly the question arose on the need to modify the existing five-grade scale of marks.

Under the assessment of knowledge and skills we understand "the process of comparison of achieved by students skill level with the standard concepts described in the curriculum." And "the contingent reflection of assessment is a mark, usually expressed in points» [1]. In educational institution a traditional assessment performs three functions: allow you to compare the academic achievement of a particular student with the standard; it serves the informational and diagnostic purpose; it is a penal and incentive tool for teacher [2]. Currently, the process of education must be systemic. Every action, within the frame of this process, should be aimed at achieving a certain goal and contribute to its achievement. One of the elements of the educational process is a grading system and registration of students' achievements. The grading system is the mechanism for implementation of the control and diagnostic communication between teachers, students and parents concerning the success of the educational process, as well as the performance of the sole determination of such by students. In general, the grading system is a natural mechanism for the self-regulation of the educational process that determines its exceptional importance [3].

**Goal of research:**

Development and practical testing of criteria-based assessment, contributing to the improvement of teaching and learning processes in school.

**Material and method of research.**

Theoretical: analysis of pedagogical, psychological and methodological literature; regulatory and legislative documents; analysis of publications on research of foreign and domestic experience. Empirical: direct and indirect observation (for students and teachers); Diagnostic survey (questionnaire survey of teachers, students, interviews, conversations with students, teachers); pedagogical experiment.

**Results of research and its discussion.**

Traditionally, grading system, based on the system of the four points : 2 ("unsatisfactory"), 3 ("satisfactory"), 4 ("good"), 5 ("excellent") is maintained in schools. Theoretically there are also 1 (one) point , but in practice this point is almost never used. Teacher, marking in the register, is focused on a number of positions, as a result, each point becomes integrated indicator of levels: of the student with respect to a particular standard, of the student with respect to the class as a whole, of the student with respect to same as himself in the previous period, at that to divide these factors in the exposed mark it is possible only through conversation with the teacher. The modern grading system, as mentioned above, has three functions. Based on these functions, we have identified a number of issues, where assessment system should facilitate the solution to the problem. The

evaluation system should: make it possible to determine how effectively training material have been assimilated, practical skills have been formed; to register as a change in the general level of qualification of each student, so the dynamics of his success in various fields of cognitive activity; the possibility of adequate interpretation of the information including in them have been created, for which assessment system must be completely transparent in the sense of the current and final grades allocation; mechanism have been created, which is promoting and developing self-assessment of the students' achievements, as well as a reflection which is happening to him in the course of the learning activity; provide and ensure a permanent contact between teachers, students, parents, class master, as well as between the administration and the teaching staff of the school; be constructed taking into account careful attitude to the students' mentality, avoiding situation which are injuring it. It is easy to notice that the consistent application of these requirements transforms the functional significance of the grading system. Information and diagnostic function is enhanced, the content of the regulatory function is changed, and a departure from penal and incentive function is happening.

In the works of foreign scientist Alexander R. and researchers of Group of reforms for assessment, it is said that "the assessment is the focus of attention of solving the problem of improvement of teaching and learning» [4], [5].

Working within the level program, which have been developed by the Centre of pedagogical skills in conjunction with Cambridge University [6], pedagogical research, aims of which was the development and practical testing of criteria-based assessment, contributing to the improvement of teaching and learning process in school have been performed in comprehensive secondary schools. Assessment in class was carried out using a special set of criteria. Only specific work performed by the students has been evaluated using the criteria. Hereafter we offer the description of process of training criteria in chemistry lessons. Criteria have been formed together with students according to the plan: the basic learning skills then grouped applying the similarity of several (4 to 6) criteria, each of which is "responsible" for a group of related skills, and a set of criteria is both a set of tasks that must be implemented in the learning process of chemistry. The marks for each criterion set on a scale from 0 to 6 points. In the process of grades allocation, each level of achievement, marked by a certain point which is supplied with detailed description - a descriptor that, on the one hand, makes it easy to turn figure-mark to verbal description of made and marked level, and on the other - facilitates the process of grades allocation, and reduces the role of emotional factor in this process.

We have denoted the following criteria: *Criterion A*. The union of the world (0 to 6 points). It is responsible for the actual knowledge of the material and the ability to correct and appropriate to use the special terms and concepts. *Criterion B*. Communication (0 to 6 points). The work, associated with the synthesis of actual and theoretical material, the ability to bring new knowledge to the student by an intelligent way, not presented in finished form, is assessed. The simplest

example of such work is the collation and comparison of two or more events with the drawing of specific conclusions, more complex is the creation of evidence system of any thoughts, ideas. *Criterion C.* Scientific knowledge and understanding (0 to 6 points). It is include various kinds of technical skills, which are divided into two groups: the skills of analysis, extraction of information and technical skills in a pure form. *Criterion D.* Scientific research (0 to 6 points). Presentation skills, skills of both verbal and physical design and presentation of any work are assessed. *Criterion E.* Information Processing (0 to 6 points). The ability to analyze and systematize the knowledge learned, to evaluate, is assessed. *Criterion F.* The performance of the experiment (from 0 to 6 points). It is include the skill to experiment, to apply theoretical knowledge in research.

Practice has shown that the number of criteria on different chemistry lessons, depending on the content of the material being studied, used forms of training, types of activities in the class, can vary from 4 to 6. Assessment criteria are need: for a student to knew that trouble he has, what knowledge he needs, which skills has to develop yet; to reduce the subjectivity of grades allocation; to get the mechanism which is equally well working as in the process of assessment, so in the process of self-assessment. The task of teacher is only to show the general scheme, to give a general idea of assessment criteria and to create an environment in which it will be possible the situation of the social contract, the contract between the teacher and students. And this situation was created. Together with students we have identified "What? How? When? would be assessed as well as have developed a specific description of the criteria taking into account age peculiarities, and learning objectives standing in front of them. It will be important that the children understand what they learn, and how each new lesson promotes or does not promote them in this way.

We offer a simple screening work carried out in chemistry class using the criteria-based assessment. It looks like this: a few questions on the actual knowledge of the minimum required material (Criterion A). Two concepts which are required definitions (criterion A). Then the piece of text from which you want to allocate all the available information there for any problem (criterion C). And, in the end, the task for comparison (criterion B) of the studied objects. It should be emphasis that the text from which it was necessary to isolate the information, the students have seen for the first time, and comparison of the studied objects has never been performed before. The criteria for this work were specially developed and discussed with the students. For example, the descriptors for criterion B can be as follows: 0 points – the task is not done; 1 point - written has nothing to do with the task, an attempt of comparison was not been undertaken; 2 points - an attempt of comparison, which, however, does not provide information about the studied object, serious mistakes of logic and factual nature have been made, conclusions are not available; 3 points - the task have been done partly, allocated one or two lines of comparison (the number depends on the available material and age), which give some idea of the studied object, but mistakes logical or

factual have been made, attempted to draw conclusions; 4 points - a task generally performed, select two or three lines of comparison, which give an idea of the studied object, but one or two minor mistakes of logical or factual nature have been made, conclusions have been made; 5 points - the task is done, revealed three or more lines of comparison, which give a relatively complete picture of the studied object, minor inaccuracies of logical or factual nature are possible, correct conclusions have been made as a whole; 6 points - the task is done perfectly, allocated four or more lines of comparison, which give a complete picture of the studied object, minor errors of logical and factual nature have not been made, correct conclusions have been made. Students easily assessed their works using so specifically prescribe the scale.

Criteria-based assessment is enough strong tool, which give the opportunity to think over successes and failures. But it is not enough for achievement of maximum effect, reflexive skills must be developed in the student. Close attention should be paid for its development. Reflection as of a meaningful so of emotional form is mandatory final stage of any work. Reflection helps the student to understand the work performed, encourages the statement of its assessment of past work, it is the mean of feedback for teacher, allowing highlight the strengths and weaknesses places of the work performed. Reflection has been performed in two ways: a written questionnaire and an oral exchange of opinions. In the first case simple questions have been used, "the most successful in the work", "the most unfortunate in the work" "wishes for the teacher-provider and for consultants (if the job was big and several teachers have been attended)", "wishes for yourself," "wishes for class mates", "the most difficult thing in the work", "the most interesting", "what I have learned in the course of work"- its specific set was defined by the specificity of work. Reflection results have been processed and informed to all whom it may concern. In the process of oral reflection all participants are adhered to develop regulations. They take it in turns talking about their experiences, trying to express their ideas fully. Standard construction of the story: that you liked, did not like, wishes for the future. The order of performance is determined by the location of reflectors, which were facing each other. Mandatory condition is to listen to each other and not to repeat what has been said. The time for reflection is 10-20 minutes. It is easy to notice that the first option works more for meaningful reflection, and the second - for the emotional reflection.

Based on the results of the research conducted, the following **conclusions** were drawn:

1) Assessment function is multirole-playing; motivation; emotionally regulating; guiding; executive; training. Using the criteria only specific work performed by the students is assessed. 2) Criteria-based assessment - is a strategy of positive assessment, ensuring careful attitude to the individual student, assessing its performance results. 3) Criterion score is not considered as a means of punishment or exposure - it is only a mean of information. 4) Criteria for work are specially developed and discussed together with the students. 5) The criteria are needed

for the student to understand what he does wrong, what does he learn more, what study skills he need to develop; to reduce the subjectivity of grades allocation; get the mechanism works equally well as in the assessment, so in the self-assessment. 6) The set of criteria initially sets and constantly maintains the frameworks of harmonized education, aimed at the acquisition of really meaningful skills. 7) Student must develop reflexive skills. Reflection is a mandatory final stage of work. It serves as a mean of feedback for teacher.

Process of criteria-based assessment contributes to the development of teaching and learning process: the teacher is involved in the process of assessment development from the moment of goal setting until getting the result, the ability to help students in the achievement of results is developed; the student learns to assess reliably, motivation for learning is increased, cognitive interest and communication skills are developed, self-assessment is raised and consequently the quality of knowledge is improved. Of course, the criterion assessment system is not lacking in disadvantages, and the process of its implementation during the research met certain difficulties, primarily of psychological nature. The decisive obstacle for teachers was the strangeness of the assessment system, laying in the changing of teacher's function. In the process of traditional assessment - teacher has controlled the process, in the process of criteria-based assessment - teacher guides a student to achievements.

### **LITERATURE**

1. Avanesov B.C. Scientific problems of test knowledge control. Moscow: Research Center, 1994.- 123 p.
2. Amonashvili Sh.A. Educational and training function of the teaching assessment of students. Moscow: Pedagogy, 1984.-296 p.
3. Andreev A.B. The conceptual approach to the creation of intellectual analysis system knowledge. Open Education. 2001.- №5. p.44-48.
4. Alexander, R.J. (2001) Culture and Pedagogy: international comparisons in primary education. Oxford: Blackwell Publishers.
5. Assessment Reform Group (2002a) Assessment for learning: 10 Principles. University of Cambridge faculty of Education /
6. The program of refresher courses for teaching staff of RK. The third (basic level). - 3rd Ed. - MTC AEO NIS Astana 2013 - p.42-82.