CONCEPTUAL FOUNDATIONS OF ASSESSMENT AS AN EDUCATIONAL ACTIVITY

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ABSTRACT. The problem with the evaluation and grades in various aspects is a topic of broad and current interest, discussed in the works of leading psychologists, pedagogues and methodists. The ambiguous nature and role of evaluation in training is described. Its meanings, peculiarities, grounds, goals, principles, functions and types are analyzed. Different strategies, as well as organized forms of examinations and grading system are discussed. The factors that affect the objectivity, validity and reliability of the assessment are mentioned. The emphasis is on modern assessment tools of learning outcomes.

Keywords: assessment, verification, measurement, testing, evaluation, grade, test, formative and rating evaluation

КОНЦЕПТУАЛНИ ОСНОВИ НА ОЦЕНЯВАНЕТО КАТО КОМПОНЕНТ НА УЧЕБНАТА ДЕЙНОСТ

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РЕЗЮМЕ. Проблемът за оценяването и оценките в различни аспекти е актуална тема, обсъждана в трудовете на водещи психолози, педагози и методисти. Описана е неоднозначната същност и роля на оценката в обучението. Анализирани са нейните значения, особености, основания, цели, принципи, функции и видове. Разгледани са както различни стратегии, така и организирани форми на изпитване и оценяване. Посочени са факторите, които влияят върху обективността, валидността и надеждността на оценката. Акцентът е насочен към съвременните средства за оценяване на резултатите от обучение.

Ключови думи: оценяване, проверка, измерване, изпитване, оценка, бележка, тест, формиращо и рейтингово оценяване

Introduction

The issue of evaluation and assessment in various aspects is a topic of broad and current interest, discussed in the work of leading psychologists, pedagogues and methodologists. The results of the control over learners' learning activity are as a rule expressed in its evaluation. It is multidimensional and multifaceted, oriented towards quality education management.

Numerous definitions of terms such as verification, assessment, control, testing have been published in the literature on evaluation studies. They are very close and often used interchangeably. The nuances of this terminology when using levels of student preparation in learning are often the subject of scientific discussion. E. Perovsky believes that verification is a wider concept used in learning than the assessment and assessment of pupils' knowledge is an expression of the relationship between what the student knows about given issues of the subject and what he should know about these issues at a time of learning (Andreev, 1995). According to R. Taylor, assessment is a process of discovering how far-fledged and organized the learning experience is from the actually produced desired results, and the evaluation process involves identifying the strength and weakness of the plan (Andreev, 1995). There are other understandings about the essence of learning appraisal, such as: education assessment is a general term that includes all processes and outcomes that describe the nature and extent of children's learning, the degree of compliance with the objectives and tasks of teaching, and their interaction with the surrounding (Satterly, 1989), and assessment is a case of interaction of one person, directly or indirectly, with another, with the knowledge to obtain and interpret information about the knowledge and understanding, peculiarities and relationships of this other person (Frith and Macintosh, 1984). Evaluation in the training process is a process of matching the learning outcomes achieved with the pre-set goals for doing it. The evaluation activity is knowledge of the relation between the need and the activity performed for its satisfaction. The assessment is a complex cognitive activity that identifies the value of the activity and its outcomes compared to the desired states of the subject with what it is supposed to be (Andreev, 1995).

Assessment as a process

The assessment is considered by scholars both as a philosophical category and as a pedagogical category. Some consider that evaluation means opinion, judgment about the quality and meaning of something. V. Andreev associates the evaluation with the decision-making process for the results of measurements made in unity with evaluation judgments for the level of measurable quality (Andreev, 2012). Evaluation is a particular form of reflection designed to determine the value properties of objects and phenomena, and their usefulness.

Evaluation relationships in the broad sense are such manifestations of public and personal consciousness in which, from the positions of certain norms, prescriptions and certain knowledge of the object under consideration, the positive or negative significance of the respective characteristics of the object is expressed, i.e. where there are norms, there are always estimates. A number of authors consider that each assessment is knowledge, but not all knowledge is an evaluation, and that each evaluation is a comparison, but not every comparison is an assessment. According to Broghen, assessment is a process in which everything is known to compare to measure effectiveness and intensity with one or other value object, and while in the process of knowledge, the subject realizes the objective reality, he realizes in the evaluation process what is the reality he is aware of, realizes himself in it (Brozek, 1982). Thanks to knowledge, the subject develops his consciousness and, on the basis of his assessment, he deepens his self-awareness. Some of the comparisons that can be made using evaluations are: student comparisons; comparisons with state requirements; comparisons of abilities; comparisons of the efforts made in the learning activity and comparisons of the achieved personal improvement. Comparison in school practice between pupils' different learning outcomes is natural and predominant in the time and yearly analysis of a learning process already in place. The assessments are important, but they can not influence the learning process that led to the final (established) outcome. Comparisons of students' learning achievements with state requirements for their preparation are also a natural process. The state requirements themselves are a benchmark (criterion) to measure learning outcomes. These comparisons are made on the basis of the adopted system of assessment - normative or criterion, and it is permissible for the legal system to be used for the procedural (current) assessment and the criterion for the resultant (the product, the result). Comparisons of learners' abilities, their readiness to master the curriculum in accordance with the objectives set, should be done with caution. The conventions and the unknown factors in these areas are many. Comparing school achievements with the efforts made is necessary, but not unambiguous. There is no unambiguous measure of the quality of the effort and its relationship to the result achieved. Comparison between school achievement and personal development can not be done uniquely because the development of personality has a multifactor character. Benchmarking is performed on the basis of externally defined criteria - operationalized learning objectives that serve as standards.

The structure of the assessment includes a subject, criteria and evaluation act. The subject is the person who determines the characteristic of the given object from the position of the criterion used as a criterion. The subjects of evaluation in education are teachers, directors, pedagogical staff, appraisal committees, inspectors, experts. The student is also subject to self-assessment of his / her learning activities and results. The assessment diagnoses the learner's ability to master the learning content according to pre-set operational objectives. The subject or object of the evaluation process is knowledge, skills, habits and competences, their completeness, awareness, correctness, accuracy, durability, links to life, as well as the oral, graphical and practical form of their expression. Concerning the acquired knowledge, which is subject to evaluation during testing, V. Bespalko (Bespalko, 1982) points to the following classification: (1) knowledge - knowledge: it is based on recognition, differentiation, classification of objects, properties, processes from a certain field of phenomena of actuality (known knowledge) in re-perceiving the previously learned information about them or acting with them; (2) knowledge - reproductive action (knowledge-copy): it is at the level of self-reproduction, discussion, referencing, analysis and application of the information on the previously used orientational basis for the implementation of a certain action; (3) knowledge - productive action or skill and habit: pattern activity on a set of objects where the subject reaches a subjective new information in the process of self-building or by transforming a certain guideline for implementing the new action; (4) knowledge - transformation and or creative action: characterized by the use of the information used to solve practical tasks in relation to a wide range of phenomena and objects; application of widely used information. Using correct questions, a level of absorption can be identified and evaluated. Effective assessment also requires effective queries, because the ineffective outcome is sometimes linked to inefficient queries, which may be inappropriate for the subject or an inappropriate question.

There is also understanding of knowledge, skills and competences not as a subject of assessment but as criteria for assessing achievements in education and as a goal of education. Clear definitions are needed for these categories. Knowledge in science encompasses facts, notions, laws, hypotheses, theories, and predictions that make up the scientific map of the world. Most often, the skills are formulated as a psychophysiological system, related to the mastery of a complex situation, which exhibits the characteristic of repeated repeatability. Specific skills in the exact sciences refer to the use of scientific information in solving cognitive problems. Competences are a series of skills structured in a system and in a certain sequence that enable individual activity of the individual. These are dynamic behavioral behaviors that demonstrate knowledge, skills and attitudes. In their realization, the three spheres of personality are unified - cognitive, emotional and volitional.

Based on the cognitive levels of B. Bloom (knowledge, understanding, application, analysis, synthesis, evaluation), evaluation and self-assessment are carried out. In the literature examining the problems of evaluation in education and learning, systemic verbs have been developed, which some authors call active and other behavioral. Their help sets out tasks to determine the level of utilization. These verbs are the following: knowledge - name, designate, define (problem, principle, object), list, describe, indicate, choose, arrange, define, repeat (rule, law, principle); Result - distinguish (facts from theories), write (formula, equation), tell, replicate, recognize; Understanding - Explain (in its own words), Link (cause - consequence, structure - function), Describe (table, graph), Convert (translate text into a table, table into text, etc.) (Graph, formula, etc.), make (diagram, diagram), measure, calculate (quantitative dependencies), give example, compare (similarities, differences), illustrate, group, classify, Sort in a new way, collect data, save data, tell; Application (concepts,

principles, laws), demonstrate (method), follow (algorithm), choose (device), make (try), build (graph, diagram) Model, decide, modify (simplify), draw, oppose (predict), compare (experimental), distinguish data from conclusions; (Hypothesis, assumptions), discover (hidden meaning, principle of organization), prove (thesis, suggestion), sequence (events), predict (consequences), discuss (problem) Formulate (problem, hypothesis), distinguish (meaning from insignificant facts), determine (relationships, relationship between conclusions and theory, between hypothesis and procedure for its verification); Synthesis - write, propose (plan, hypothesis, procedure), compositions (task), assemble (facts, parts), develop (experiment, project), construct, combine, design, plan, organize, Modify hypothesis, synthesize, integrate, create; Assessment (whether the ideas meet the criteria), defend their position, discuss critically, find weaknesses, justify the rightness. The full use of these in the design of verification tasks allows preliminary determination of the subject of the assessment. In order to specify the assessment objectives, more and more lecturers are turning to taxonomies. Appropriate for evaluation is also recommended by R. Ebel.

The accepted evaluation criteria are especially important in the evaluation process. They are a measure of truth, of credibility. The criterion is a unity of qualitative and quantitative features that reveal the essence, content of the process, or the object assessed with their help. The evaluation criteria are derived from the objectives of the training, its functions and the specific conditions under which it is carried out. M. Andreev points out that the socially determined learning objectives can play only the role of a generic, global criterion. They are a measure of effectiveness, optimality, intensification and quality, related to the time spent in society for the formation of the socially valuable qualities of the personality and the mastery of professional experience created by mankind. Training is designed and programmed specifically, therefore, the criteria are projected into state documents by establishing educational content (Andreev, 1982). It is a difficult task to formulate criteria that create criteria, and some critics think that formulating them is not worth the effort. American authors Callahan and Clark in their book "Teaching at Primary and Secondary Schools" describe the necessary steps to formulate criteria that create criteria (Radev, 1996). Criteria provide a standard for depth of penetration in the phenomenon studied, breadth of scope and detail of knowledge, their relevance to the technologically-practical meaning. Relative to the assessment of knowledge, they can be: correctness, accuracy; comprehensibility; specificity; generalization; systemic and durable; relevance and portability; personal significance. The criteria are usually expressed through a system of indicators. The indicator can be considered as a generalized qualitative-quantitative characteristic of certain processes and phenomena. It is also defined as a measure of the state and change of the object of study. It is also defined as a means of measuring, collating, referencing, and as measured by a particular methodological feature of the content of a given concept or regularity as it appeared at a given place and time. In clarifying the scientific-content characterization of the notion criteria and indicator in the literature, there is no uniform opinion and distinction between them and the relationship between them. It is acceptable to consider the criterion as a measure of the specifics and the performance of an activity, and the indicator to qualitatively or quantitatively characterize individual countries, properties or capabilities of the activity or phenomenon. In their concrete application to measure the effectiveness of the activity, some dynamics are observed depending on the complexity of the phenomena studied, the degree of community, the subordination and the subdivision of the elements of the system of phenomena and processes that is measured or evaluated. In some cases, the criterion may be an indicator of phenomena or processes of a more general nature and as a criterion for phenomena and processes with a lower degree of community. The evaluation act or the time of the assessment is a comparison, a search for compliance of certain knowledge about the characteristics of the object under assessment with previously adopted prescriptions (norms, criteria), giving expression of the degree of conformity, i.e. the positive or negative significance of the object. The evaluation criteria act as a specific scale with certain meanings. Evaluating an activity or object is one of those meanings that corresponds most accurately. The rating displays the degree of zooming in or out of the ideal score. Different grades have different impact on learners. A positive evaluation, reflecting the objective state of the controlled object, when it is fair and bears the appropriate incentives, inspires the personality for new efforts and achievements. A positive assessment that is not considered fair does not have the same impact. It is considered undeserved and leads to negative consequences. This ratio is also observed in the negative evaluation, i.e. it can also be fair or unfair and in this sense has a different impact. The fair negative assessment requires testing to determine its future activity in the sense of deciding whether to repeat or overcome the weaknesses it has committed. The expected result is improving performance. When a negative assessment is unfair, it often leads to new violations. Regulatory capabilities of assessment are realized through its impact on the personality. The effect depends on both the quality of the assessment and the organization of the assessment impact.

Scaling scales can be distinguished in the following way: Name Scale - it is applicable to objects that allow only a census. Several counting operations are possible: frequency, fashion, and quantity of uniform objects labeled with the same numbers. Ranged scale - establishes the order of the objects. Objects need to be compared to some common feature to establish the location of each object in the scale (earlier / later, higher / lower, etc.) as the elements in the scale are not always evenly spaced. Frequencies, fashion, median, and odds correlation coefficients are possible. Interval scale - an ordered set of actual numbers with arbitrarily chosen zero point. Applies to objects whose properties change evenly over a certain interval. All arithmetic operations are applicable except for finding the coefficient of variation - the ratio of the standard deviation to the mathematical expectation. The scale of relationships - an ordered and monotonous set of real numbers with a natural zero point. All arithmetic and statistical operations are eligible.

There is also a wide variety of distinct functions of assessment. As such, they can be referred to as: training, educative, control, development, diagnostic, prognostic, selective, regulatory, information, emotionally motivating,

stimulating, social, cognitive, grading functions. There is a clear distinction between evaluation and a grade. The latter serves to establish a numerical analogue (numerical or verbal, quantitative or qualitative) of the evaluation decision. According to Belich's attribute analysis, each individual activity involves successively: user, motive, purpose, object, method, means, and result. In this sequence, another element of comparing the end result with the goal is needed, and this is, by its very nature, the assessment. There are mainly two main reasons why assessment in training is a necessity. They are social and pedagogical. Social reasons relate to the social profitability of learning, to the preparation of the citizen of modern society. The pedagogical reasons are associated with the full development of the personality, with the development of his individual abilities in the context of an effectively constructed learning process through the use of appropriate methods and activities. Critics identify a whole series of arguments against the test and the grades. The most common arguments against the assessments are: cognitive results, the presence or lack of knowledge are taken into account, but the emotional, relational effects of the training cannot be correctly identified. The assessment process inevitably involves heterogeneous expectations, both for tutors and exhibitors, as well as for learners. Individual perception and personal self-regulation of environmental behavior may distort the objectivity of the assessment and make false signals for comparison. Evaluations only reflect the curriculum content (curriculum), and this is far from achieving the overall personality goals. Assessment is inherent in personal relationships and goes away from the real goals of learning that is contrary to learner's needs because it is rated by someone for someone. Assessment is an intrusion into the inner world of man and provokes emotional tension. The assessment is not always reliable enough because it reflects the existing reality with all the connotations and limitations of that reflection. Refusal of comments does not mean absence of pedagogical assessment. The evaluation acquires a qualitative character in the context of a meaningful assessment that allows to solve the main tasks of the control and to form the self-assessment. In the variety of evaluation variants, as a modern means of assessment, there are a number of links to discussion, contradictions and ways of improvement. Normative assessment is based on a comparison of learners' individual achievements with others or on comparisons of individual groups. The purpose of this assessment is to show at what level everyone has mastered the curriculum, what progress has been made, and which category falls within the distribution of learning achievements. In the normative assessment, the dispersion of learning outcomes is large and the outcome varies greatly. Conclusions are drawn on average achievements and decisions are made in the field of training differentiation in current day-to-day learning activities. In this assessment, exam questions are diverse in purpose and complexity. Norm is a kind of criterion, but it is determined on the basis of how performance is distributed in a given set of learners, and not on the individual performance characteristics. Therefore, the regulatory assessment creates conditions for scattering the requirements within the different groups. In benchmarking, the learning achievement is compared to a standard (benchmark, criterion), external target or state requirement. Criterion assesses how many learners have achieved the goal (criterion, standard). The criterion is presented as an absolutely necessary minimum of quality in preparation for successful completion of a particular degree. The exam questions are strictly defined, they check out unambiguous knowledge, skills, habits, and lack the diversity that characterizes the normative assessment. Threshold achievement is typically set at 50%, and the criterion typically varies between 60-100%, with the most commonly used criterion being 70% of knowledge, skills and competencies. The higher the criterion, the smaller the dispersion (scattering). A person below the criterion is considered unsuccessful. Formative assessment is a continuous process that allows information on the strengths and weaknesses of learning to be collected, focusing on what learners can do, not on their weaknesses and errors. This leads to peace of mind, confidence, and satisfaction with learning success and increased efficiency. The evaluation is formative when the information it receives is actually used as a factor in adapting the training to the realization of certain educational goals. It is a qualitative assessment of different aspects of the outcome achieved in the learning process and the orientation in a given action and task, as well as characterizing a particular difficulty. The aim is to focus efforts on developing specific knowledge and skills, to detail strengths and problem areas in achievements. This combines the norms of social comparison with the individual comparison of the learner's achievements in terms of his / her own progress. The formative assessment supports the reflexive behavior of the student by developing self-assessment skills in a relaxed environment (Gurova et al., 2006). Formative assessment has a diagnostic, motivational, and predictive function. It is realized through open discussions on achievements and errors, short comments, self-assessment by certain criteria, mutual evaluation, informal discussions, "mirror" evaluation, portfolio, etc. The teacher and the student assess the learning strategies and their outcomes against the learning objectives. Both subjects can provide feedback on strengths and weaknesses to narrow the gap between the actual and the recommended levels. Feedback enables operational control over achievements and ways of working. Through it, it can be timely to determine the appropriateness of the methods used by the teacher, the deficiencies in mastering the knowledge, skills and competences, the misunderstanding of the curriculum or the performance requirements. Feedback is a major tool for making a formative assessment. It creates reflective behavior that guarantees success. The trainee is placed in natural conditions of cognitive activity and unconditionally masters and consolidates specific knowledge, skills, competencies and cognitive approaches for self-realization. Formative evaluation can only be realized if the person receiving the feedback is in a position to accept, realize and make sense of it. This implies self-assessment skills and some autonomy that is the result of purposeful preparation. Key features determining the content functioning of formative assessment are: part of effectively planned learning; emphasis on how to learn; key professional skills of the lecturer; humanity and constructivism, since evaluation has an emotional effect; motivation; the result of a mutual understanding of the learning objectives and the evaluation criteria; importance for improving the individual learning process; provides constructive guidance; develops students' capabilities for self-assessment and self-management; builds a

holistic view of the learner and guides him towards improving the learning process. Personally-oriented learning, changing the orientation of teaching from monologue to dialogue will eliminate the fear of asking questions and making mistakes.

Portfolio is a product folder of the work of each learner that allows for the systematic tracking of its development - achievements, successes and difficulties in fulfilling certain tasks. This approach provides a good opportunity for feedback. Through it, all those involved in the learning process can at any time receive information on the level of training, success rate, professional abilities and progress in the relevant field. Portfolio types can be differentiated depending on the selection orientation and the conditions of use (official regulation for external and internal evaluation or creation for personal use). According to these criteria, the following portfolios exist: portfolio-file; training portfolio; reflective portfolio and professional development portfolio. Profiled assessment refers to the learning of a specific topic, a given piece of study material, a given cognitive category or an important element of preparation. It is based on individual essential characteristics of learners' achievements arising from the objectives of the subject matter. As regards these characteristics (aspects), the evaluation criteria and the performance indicators are formulated. The goal of the achievement profile is not to sum up all the components of achievement, but to present them differentially. For example, for physics training, some of the components shaping the profile can be: oral testing, seminar exercises and laboratory practice, it is acceptable for the different profile components to receive different results as assessed by several analytical, specific assessments. The profiled assessments lead to the formation of the overall assessment on the subject. The most explicit feature of the evaluation is the most obvious. The final profile shows which goals have been reached and at what level. Advantages include the following: the great operational significance for learning cognitive structures informs very accurately about the achievements and nature of gaps in the learning content; stimulates a more generalized reflection on the consistent (progressive) realization of the common goals; dynamics and flexibility, and justifies the formation of final assessments of individual subjects. The limitations of the profiled assessment are: examining more elementary knowledge and abilities of learners because they reflect smaller components of comprehensive learning content. Without tests profiled assessment becomes obstructed or impossible. There are no uniform national requirements, standards, examination procedures that are objective and reliable and are not suitable for all types of learning content. Overall assessment is associated with shaping a global, aggregate assessment of student's achievement. Final examinations after passing an exam after certain periods of training are common. The overall assessment does not define individual characteristics of learning achievements and competencies. The cumulative evaluation performs primarily a selective and certified function. It is realized through exams, tests, research, projects, etc. And is used when the grounds for successful competence formation are sufficient.

All evaluation options have their advantages and disadvantages. They cannot be universal in terms of relevance, but may be appropriate in a learning process according to pre-set goals. Combining them in the learning process is the basis for achieving sustained progress and reliability of ongoing and final evaluation. Didactics includes a field called docimology that examines, describes and explains the laws and technologies of verification and assessment as part of the control in the learning process. Docimology has been identified as a relatively self-directed area in the first two or three decades of the twentieth century. The word docimology has greek origins (dakime - test, exam, docomoso - test, docimastycos - examining). The founder of this line is the french scientist henri piron. Some other modern tools for evaluating outcomes in and out of learning are: multi-valued evaluation systems, multi-criteria or complex grades, no-grades system, differentiated grades, meaningful evaluations and criteria-based assessment, rating and modulation rating systems. Each evaluation must have an emphasis on objectivity, reliability and validity.

Many theoretical and methodological tools related to the modern tools for evaluating the learning outcomes describe the theory and practice of creating tests and test tasks, the theoretical basis for the creation of tests, terms, concepts, classification of tests, and indicators of quality. Problems related to the passing of the test ball into a note, the didactic possibilities of the test lecture, the use of computer testing, the procedures for making tests, the prognostic validity of the tests, the comparison of different evaluation models are current. Discussions on normative-oriented and criterion-oriented tests are of broad and current interest. A field called didactometry is developed, which deals with the development and implementation of didactic tests.

Conclusion

The assessment and evaluation of learners' knowledge and skills are topics of discussion in today's pedagogical theory and practice, which are becoming more and more important. A determination has been made to develop and use new methods and forms, as well as to improve the existing verification and evaluation system by developing objective indicators and criteria for establishing the level of preparation and development. In order to achieve greater objectivity in the evaluation and realization of its main functions, it is advisable to thoroughly consider the combination of using different methods - traditional and non-traditional.

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