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The dimensions of educational evaluation

By analysing the functions of educational evaluation we aimed to arrive at defining the dimensions of educational evaluation that offer insight into the process, resources, methods of evaluation from different perspectives – the dimensions. In this context, I defined three dimensions of educational evaluation: the personality dimension, where the levels of relationships between the object and the subject of educational evaluation are examined, the didactic dimension, the aim of which is to optimize the process of teaching and learning through the function of feedback, and the social dimension, the point of which is to enrich evaluation with the achievements of modern science, technology and social relations.

By analysing the objectives and functions of educational evaluation we have arrived at the definition of *the dimensions of educational evaluation*. The reason for this is the fact that the problems of educational evaluation, the process itself, its means and methods can be examined from different points of view.

Learning results express how quickly and thoroughly the students are capable of using the knowledge, skills and abilities acquired during school instruction and if they can apply these on other lessons, in their further studies or their personal, professional life.

The function of evaluation on the lesson is the expression of the quality of learning results, the evaluation of changes or shifts that the individual achieves and the provision of this information to teachers, students and their parents. *The aim of evaluation* is also to build an effort to positively influence factors affecting the academic performance of students. It should be noted that evaluation for students is an expression of their achievements, but it also affects their further learning progress. Evaluation can have a motivating as well as demotivating effect on studying. Therefore it is clear that students themselves should be interested in evaluation and be familiar with its criteria and rules. *For teachers*, evaluation has an informative character and is the basis for analysing the results of teaching, and the reason for changing or keeping certain methods and techniques of guiding the process and the students' learning activities. For parents, evaluation results may be contradictory especially if the expectations of the school and the parents are not in conformity with each other.

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1. The social and personality dimensions of educational evaluation

The essence of personality lies in the coordination of experience, behaviour and social perception, by increasing the level of knowledge and the formation of one's mental properties and that of other members of the community, states Manniová (in Horváthová–Manniová, 2008, p. 154). The acquisition of positive personal characteristics that schools strive to achieve mainly happens through social interaction, which is reflected in the quality of the individual's relationship with other members of the community as well as in the individual's behaviour towards them. Features of personality are closely related to the individual's interpersonal and intrapersonal competences. Intrapersonal competences of the personality are those complex activities of the individual which focus on oneself and one's own development. This is for example self-knowledge and self-understanding, forming the basis of self-evaluation which is represented in the assessment of one's own abilities, beliefs, characteristics, motives and behaviour. Self-motivation, which means the conscious mobilization of one's own abilities and directing them to certain specific goals, makes the individual capable of self-management which determines the strategy of activities to hit the chosen target. The individual's main interpersonal competences include social perception (in relation to others) and communication. If we talk about interpersonal competence as one of the personality competences in the field of social perception, besides knowledge we also mean the complex of those relations and attitudes which enable perception and the knowing of man by man (Manniová, in Horváthová-Manniová 2008, p. 158). Social perception at school is a way of social cognition, influenced by the social environment of the school and depending on life experience and currently by the rate of being informed as well. Social interaction, social relationship and its perception occur through communication. Verbal or non-verbal communication and intentional or spontaneous communication express the relationship between the main participants of the interaction.

The expressive aspects of verbal, non-verbal and meta-communicative contents expressing the dyadic relationships of individual – individual, individual – group and individual – society are of concern to the personality dimension of educational evaluation. The main function of verbal evaluation is to regulate the behaviour of students through positive social reinforcement, rewards, motivation, or on the contrary, by penalties and disincentives. This context also allows the examination of specific features, respectively dilemmas of educational evaluation caused by subjectivity or just the opposite, the efforts of objectivity, the teacher's preconceptions, the halo effect, the teacher's personality, etc. What is important is how the evaluation results of school performance are experienced and decrypted by students of different ages and their parents coming from different socio-cultural conditions, and how it affects the students' course of learning. As Kolar and Šikulová noted (Kolář, Šikulová, 2009, p. 55), evaluation verdicts and their possible social consequences affect the ideas of families on the prospects of their family members and also allow the inclusion of families in the social hierarchy. This aspect is therefore undoubtedly a thesis of the social dimension of educational evaluation.

2. The didactic dimension of educational evaluation

Evaluation is the process through which it is possible to find connection between the set targets and the achieved results. In this process, evaluation provides information on the extent of the achieved goal. The aim of evaluation is to optimize the process of teaching and learning through the function of feedback. In connection with the didactic dimension, the question arises whether the results of educational evaluation are applicable, especially at a time when the social value of education is changing.

3. The social dimension of educational evaluation

The permanent enrichment of the functions of evaluation is a general social phenomenon. It is caused by socio-political changes, the development of pedagogical and psychological knowledge, the development of science and technology, and the application of research findings in educational and didactical practice.

4. New methods of testing and evaluation

In addition to traditional testing methods such as oral tests, achievement tests, the assessment of various written works (graphic design, projects, protocols of measurements, etc.), at present other methods of testing and evaluation are applied as well, in particular:

One of the current trends in student evaluation is the introduction of the so-called portfolio in which the teacher can store the student's works systematically and for a long time (mid-term and final achievement tests, protocols of measurements, drawings, projects, reports, essays, the teacher's records of the observed student, the results of interviews with students, selfassessment sheets of students, messages and notes of parents, etc.). The teacher thus has the possibility to follow the direction, the nature and degree of changes in the student's learning. The portfolio should also enable students themselves, their parents and other interested participants to get the fullest possible insight into how the student learns and thinks, how he or she creates technical or other artefacts, how he or she behaves with other people, etc., that is the various components of the student's personality, interests and talents. The portfolio allows the student to succeed with different learning styles. The portfolio is evaluated in an interview when the student answers the questions of the examination committee relating mainly to the explanation of portfolio items, defending their accuracy, etc.

The type of testing where students are allowed to use any literature and aids (in English: open-book exam) is also widespread. Such testing is focused mainly on higher cognitive processes such as analytical or critical, creative thinking, the ability to solve problems, the ability to acquire and use information, etc.

At present, authentic learning and the authentic evaluation of students is a very current trend. The teacher organizes the teaching process in a way so that it could be comparable to the real world and life as much as possible and students could apply the subject matter of instruction meaningfully, for example creating something that brings joy to themselves, their parents, friends or other loved ones, and the community. With authentic evaluation the artificial school task is not assessed (e.g. the exercises of an achievement test), only the student's performance, which is meaningful even outside teaching, out of the school. For example, it is not enough if the student describes the general phenomena of the electromagnetic field, but he could be able to design an operating front door bell. With authentic evaluation it is not sufficient that students merely reproduce the curriculum, but on the contrary, they must search for information, interpret them, analyse, produce, create, explore and solve problems related to the subject.

The students could also be involved as partners in the evaluation process. For example, they can correct and assess educational tests themselves according to predetermined criteria which can be formed with their and the teacher's involvement. Such a procedure has an educational impact as well, forming various character traits of students, such as honesty, fairness, persistence. It is also appropriate from time to time to carry out a discussion with students focused on testing, evaluation and marking. One of the current trends is also students' self-assessment and their assessment of other students, called peer evaluation. Both of these evaluations are taken into account in the final evaluation. For example, a student will first evaluate his response alone (essay, oral report, etc.) then it is assessed by his classmates and eventually by the teacher who compares and considers the student's self-evaluation, his/her own and the evaluation of classmates. Students thus learn to evaluate themselves, to value other

people, objects, processes and the phenomena of the surrounding world and to receive and reflect on the evaluation of their person from others.

The formative evaluation of students is advised to use in a much greater extent. The aim of formative evaluation is feedback, acquiring information on how students learn, detecting and diagnosing weaknesses, mistakes, difficulties and their causes in the process of learning in order to eliminate them and make students' learning activities more efficient. For the teacher, feedback helps to choose the optimal teaching practices. Formative assessment did not use to be associated with the marking of students. Formative assessment is often identified with students' continuous testing and evaluation, which is a mistake because in continuous evaluation the subject matter of one or more lessons is assessed, the causes of deficiencies are not detected and the student is not usually informed of these deficiencies, nor on how to eliminate them and make the learning process more efficient.

Verbal evaluation of students is also widely used complementing the marking process or even replacing it. It is very difficult to assess students' attitudes, interests, their value system, talents, skills and core competences with a mark. The biggest disadvantage of verbal evaluation is that words can be ambiguous. Verbal evaluation is more laborious than the evaluation with a number, as the teacher must invent a verbal assessment for each student, plus pay attention to avoiding its repetition. Therefore, the tendency is to combine number-based evaluation with verbal evaluation. Verbal evaluation, the so-called student profile should include in particular:

- the student's interests, special skills, talents,
- the quality of the achieved results,
- moral and personal characteristics, diligence and conscientiousness,
- activity and independence,
- the understanding of spiritual values,
- the level of the student's key competences (how he can study independently and rationally, what his relationship is to learning, the ability to solve appropriate problem tasks, the level of critical and creative thinking, communication skills, personal and interpersonal competences, e.g. the willingness to help others, respect, courtesy),
- the level of knowledge and skills of the student,
- behaviour, respect for educational and social requirements,
- aesthetic expressions and aesthetic sense,
- the protection of material values.

In vocational training there is a tendency for testing and focusing evaluation on acquiring the relevant professional and key competences, and achieving the appropriate standards. Evaluation is often external. Not only teachers evaluate students, but vice versa, students also assess the quality of teachers' work through anonymous questionnaires. The humanization of students' evaluation is based mainly on trending towards the progress in their development, detecting and evaluating changes in their attitude, skills and knowledge, compared to a previous state, and the students themselves at the time. It is thus about the individualization of the student's evaluation. Comparing the student's performance with the standard is subordinate here and is implemented through tests to verify the achievement of the required educational standards. The aim of the humanistic-oriented evaluation of students is to develop their self-assessment skills.

4.1 Authentic teaching and evaluation

Another trend in teaching and evaluation is authentic teaching and the students' authentic evaluation. Not only in the past but even today quite often happens that students after finishing school are not ready for real life and do not know how they should apply the acquired knowledge in practice. To the elimination of these shortages a new trend in learning could contribute – authenticity. Applying this trend the teacher prepares and organizes the learning process in such a way that the student does not only understand but also contributes to creating the work (or even creates it himself) that is needed in real life.

Authenticity in education contributes to a deeper understanding of the curriculum and its point in real life, making the lesson more interesting and varied. I. Turek (2008, p. 246) states that in authentic evaluation it is not artificial school tasks, e.g. exercises in achievement tests, that are assessed, but students performance, which is meaningful even outside teaching, outside the school. Authentic teaching and evaluation is very close to practical teaching since students learn to apply theoretical knowledge in practice.

4.2 The functions of educational evaluation

According to Turek (Turek, 2008, p. 340), the main essence and function of evaluation is its diagnostic function, which is aimed at determining the extent of students' knowledge, skills and habits, and other significant qualities of their personality. The importance of the motivational function of evaluation lies in the fact that it has the potential to move students forward, help them to achieve success and positive appreciation. If during the education process students are motivated mainly by means of assessment, it may happen that evaluation becomes the aim

rather than a tool for achieving the aim. The function of feedback in evaluation lies in the teacher's providing feedback to students on their performance, learning activities and the efforts made to perform the task. However, evaluation also fulfils an informative function, particularly in terms of providing study results to students and their parents. Evaluation in education sometimes functions to regulate student learning activities. If teachers formulate views on students, direct activities and draw attention to errors or incorrect procedures, they use the potential of the regulatory function of evaluation. The regulatory function therefore assumes a detailed analysis of student performance, including focus on the students' learning styles and methods, and providing assistance in solving possible problems. By fulfilling its regulatory function, the process of evaluation also completes its educational function because it leads (or should lead) to the formation of positive personality traits, such as independence, responsibility, persistence, which students can apply in relation to their surroundings as well. Here it is possible to mention the development function of evaluation as well (Turek, 2008, p. 340), particularly in terms of developing the student's ability of self-control and self-evaluation. Very closely related to the development function is also the prognostic function of evaluation since evaluation has the potential to determine the students' perspectives, the possibilities of their further development, and who they can become and under what conditions (Turek, 2008, 340). The conative function of evaluation means tending towards an active effect on the student. Above all, it is related to the basic human will to act and through this function students are guided through the activities they are performing while also being offered a selection of the most appropriate routes taking them to finish (Sršníková, 2011, p. 20). Based on research, Petty (1996) argues that teachers should emphasize the efforts and persistence of students because it increases the effectiveness of teaching. Students should learn to evaluate themselves, consider their goals realistically and mainly to be able to assess how their own performance depends on their efforts: deciding when to attempt to reach for a higher purpose and when to stay on the ground just yet. If we want to achieve such a state, it is necessary to focus our attention on the way the student works and not his or her personality. The differentiating function of evaluation is the separation of students into homogeneous groups, for example on the basis of their school performance, the level of their communicative competence or pace of work. In education, the teacher can use the results of such evaluation in planning and prepare activities of various difficulty levels for individual students. The differentiating function of evaluation may appear at schools also in a negative sense, for example when the criterion of creating classes is the academic success or failure of students. Negative charge is also carried by the selective function of evaluation, especially when the results of school evaluation absolutize, namely when it disables a student to apply for study in a selected school.

When implementing educational evaluation or control, the shortcomings may also appear. Educational objectives in most cases are general and vague, i.e. we cannot determine unequivocally the "ideal state" to be achieved. We do not know clearly what is to be regarded as the result of the education process: knowledge (i.e. memorizing and understanding information), skills (specific and non-specific transfer – the application of knowledge) or abilities as well, for example the ability to learn, or also the attitude, the student's effort, perseverance, etc.? If yes, then what should be the ratio of these elements represented in evaluation? We do not exactly know the answer to the question what to measure, therefore its validity (weight) is difficult to assess. Although marks are there at our disposition to evaluate students' performance, it is not clearly defined what two or three, etc. really are. In addition, student performance is not constant, but on the contrary, it is time-variable. We do not know how often to classify and evaluate the student for his or her assessment to be reliable (accurate). Thus, we do not know the correct answer to the question "How to measure it?" either. The consequence of these factors is the subjective evaluation of students.

If evaluation is subjective, it tends to be unfair resulting in the fact that the student does not agree with his or her assessment. In this case, the teacher's control and evaluation do not fulfil their functions, including that of educational, motivational and prognostic. It often happens that students who did very well at school do not succeed in life as much as their classmates with generally weaker results. One reason for this contradiction is the difference in evaluation criteria in school and practice.

The teacher's duty is to develop such skills of students which enable them to perform well in life, i.e. the ability to think for oneself, make decisions, take action and learn. Therefore, the teacher should not only examine the outcome of the learning process but also the learning process itself. After all, the development of learning skills should be one of the main aims of the school.

It is known that many students prepare for the lessons (they learn) the way their teacher is going to test them. Many teachers, however, direct testing to a lower level, mainly to remembering information (facts, formulas, definitions, theories, etc.). The result is that students prefer memory learning.

The assortment of the functions of evaluation is far from being unified and complete. Therefore the classification of Golnhofer (2003) was particularly inspirational for us, mentioning five evaluation functions according to the purpose they fulfil in the education process: the development-formative function, the function of feedback, the informative function, the function of greater efficiency and the differentiating function.

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