## ESZTERHÁZY KÁROLY FŐISKOLA NEVELÉSTUDOMÁNYI DOKTORI ISKOLA

# The Theory of Educational Evaluation

### HABILITÁCIÓS ÉRTEKEZÉS TÉZISEI

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## Content

Introduction
1 Control and Evaluation in Teaching - Definition of Terms 5
2 The qualitative transformation of understanding the essence of
the education process and learning
3 The concepts, functions and dimensions of educational
evaluation
3.1 The teacher's attitude to students and the methods of
evaluation11
3.2 New methods of testing and evaluation
4 Categories of educational evaluation
Conclusion
The theses of the submitted habilitation thesis
References
The data of the author's scientific activities related to the topic of
the habilitation thesis
Publications in the field of the topic of the habilitation thesis . 22
Scientific lectures in the field of the topic of the habilitation
thesis
Projects, tenders, membership

#### Introduction

The publication *Theory of Educational Evaluation* is divided into four chapters. Each chapter contains a concise summary with information about the content of the particular chapter. All four chapters focus on micro-evaluation.

The first chapter offers a view of the controlling process and evaluation as part of the management process with particular reference to one of its part - the education process. First of all, I provide a definition of the controlling process in general and list its tasks and phases. I offer different views and definitions of control. There is a more detailed analysis of control in the education process, which consists of two interconnected and dependent tasks. The first is to obtain information about the results of the education process, so it focuses on student performance and the level of the achievement of goals. The second is to evaluate the results of the education process. This is referred to as student evaluation. I also define the concept of evaluation in general as well list the specifics of educational evaluation. The definition of the specifics of educational evaluation is of great importance in terms of the structure and content of the monograph because each of them will be discussed separately in the coming chapters.

Educational evaluation takes place mainly within the education process, and for this reason the second chapter focuses on this process. I point out that the education process which is intentionally controlled is a systematic and organized process between teachers and learners in the social environment of the school in which a sequence of cognitive, learning-oriented operations and non-cognitive actions aimed at social and personal education in real or simulated situations take place. It is also

affected by the conditions in which it happens. Apart from this, external conditions which represent the character of socio-historical, cultural, political and social context also have an influence on how the nature of the education process is viewed. This factor is analysed in the part called 'The concepts of the education process'. Internal conditions of the education process are those characteristic traits of the subject and object, which they take into the process and which later become the object of their development. In this respect, the aim is to focus on the teacher's personality, and I will follow a paradigm change in their acceptance, depending on the concept of teaching. There is more on this topic in part 'The teacher's personality in relation to the concept of teaching'.

How the view on evaluation in the education process changes according to the concepts of teaching, is what the third chapter, 'The concepts, features and dimensions of educational evaluation' focuses on. I identify five current concepts of educational evaluation: the competitive concept of educational evaluation, non-competitive concept of educational evaluation as well as the co-operative concept of educational evaluation and based on domestic literature I will discuss the humanistic oriented approach and the evolving concept of educational evaluation. Furthermore, I will characterize the different functions of educational evaluation, which emerged gradually as the demand for evaluation grew. I offer inspiring classification of the evaluation function according to the purpose they serve: emerging-formative function, a function ensuring feedback, an informing function, a function ensuring greater efficiency or a differentiating function. By defining the functions of educational evaluation my intention is to get to the dimensions of educational evaluation which I consider important because they provide a more plastic picture of the process, means and methods that can be applied in educational evaluation. From this perspective, I intend to examine in details the personal and social dimension as well as the didactic and social dimension of educational evaluation.

The fourth chapter 'The types of educational evaluation' focuses on the pros and cons of different types of educational evaluation and their impact on the development of students' personality. I emphasize the fact that different types of evaluations differ from each other not only by their informational value, but also by the motivational consequences that arise from the information. In this chapter I intend to introduce the methods and forms of educational evaluation in relation to the different stages of the evaluation process. In order to make the evaluation efficient, to fulfil their functions and, last but not least, to make it a means of shaping the students' personality, it is necessary to stress another aspect and that is the importance of having clear rules of the evaluation set in advance. This can also help to make the evaluation more objective. In the third subsection, which is called 'The micro-level of educational evaluation' the condition of the examined problem, I present several studies on the evaluation of today's schools and their results in terms of classes and students. Since educational evaluation is such a broad issue in my publication it was impossible to examine it from every possible aspect.

### 1 Control and Evaluation in Teaching - Definition of Terms

Traditional pedagogy is based on the structure of the education process, which indicates that the student is not a passive object, but an active subject, and that between the teacher and students a transfer of information (giving - receiving) and feedback takes place.

Evaluation is a process which focuses on evaluating a particular activity, phenomenon, situation, action and behaviour through verbal and nonverbal means. This is a broad area of short and long-term activities of teachers such as examining, testing, controlling, and evaluating students. The result of these activities is student evaluation, respectively the evaluation of a class or groups in various forms. Although in practice the terms evaluation and classification seem interchangeable, it is important to realize that these terms are not equivalent, evaluation is a broader term and it includes classification too, which is the result of the evaluation process. However, classification is not the only result of this process.

Evaluation in the practice of education has three components:

- **quantitative**, which gives information about the number of tasks that students were able to solve and put into practice,
- qualitative, the essence of which is a general summary of the students' ability to solve a specific task by putting the knowledge that they have obtained into practice,
- value judgment that allows the teacher to see improvement (or worsening) of the students' knowledge and their practical skills.

Student evaluation in the education process is closely related to diagnosing, that is identifying and assessing the students' level of knowledge, skills and abilities. Getting to know students can result in a more positive approach to learning on their part and consequently acquiring new knowledge.

In the controlling process there are some phases (Sedlák 1998, 159) that represent the different stages, respectively activities arranged in a time sequence. The basic controlling process consists of partial phases or steps:

- drawing up a set of standards that are expressed in money, in natural or quality units, or any combination thereof; for each form of expression first the indicator is selected and then the extent is determined.
- measuring the actual performance most of the time takes place in the form of personal observation;
- evaluating the actual performance by comparing it to the standard. In
  this case two things can happen the performance is either in harmony
  with the standard or it is not. In case of the latter the deviation from the
  standard needs to be identified and after this the performance standard
  has to be examined and reassessed and in accordance with the terms
  readjusted.
- correcting is an important part of the controlling process, which monitors the implementation of the appropriate corrective measures in the operation.

# 2 The qualitative transformation of understanding the essence of the education process and learning

The concept of the education process can be defined as a planned, purposeful and deliberate action carried out by the teacher and it is aimed at the student so that he is systematically educated. The object of education and training (student) is also the subject of the teaching process, because in addition to acquiring new knowledge, capabilities, skills and developing some habits and cognitive processes that shape his personality, he influences the teacher's activities.

Apart from obtaining and acquiring knowledge among the tasks of the education process its educational role, formative, propedeutic and developing roles have to be mentioned too. As aptly stated by Petlák E. (2004, 67), "according to the recent perception of the education process it

is not only about teachers transmitting knowledge to students but also about teachers using the so-called drivers of the education process. By this I mean a conflict between the cognitive and practical tasks on the one hand and the actual level of knowledge, competences, skills and mental attitude of students on the other hand. The essence of this motive power is the contradiction between the two sides of the same process (tasks, questions, exercises etc. on the one hand, finding answers, solutions etc., on the other). "The dducation process is therefore a multilateral process with the objective of, as aptly stated by Petlák E. (2004, 65), "gaining new knowledge, competences, skills and habits."

The education process, as every purposeful human activity is subject to several laws. These are mainly the following ones:

The law of motivation - which is aimed at evoking a positive attitude in students towards learning in order to raise their interest in it. The actual motivation is divided into intrinsic and extrinsic motivation. Intrinsic motivation is an awareness of the need to learn and it comes from the student himself. Extrinsic motivation comes from the teacher and through the use of his interests and other relevant factors it is heading to initiate students to learn.

The law of reciprocal information - claims that students need to be informed about the results of their activities as often as possible in the education process. Horvathová and Szőköl (2013, 24) explains that "a systematic informing of students of their performance, accuracy or inaccuracy when solving tasks or exercise, etc." is required.

Transfer Act - means the possibility of students in the education process to use all the knowledge and information at their disposal.

The law of revision - indicates the need for constant revision of topics which have already been covered and the need to teach students

how to apply the knowledge and skills that they have already mastered in practice correctly.

Following the above-mentioned facts, the education process is divided into several phases which may individually vary depending on the length and type of the process.

The education process is made up of the following phases:

**motivation phase** or student preparation for mastering a particular topic. During this phase the teacher should stimulate students' interest in the topic that they are going to study;

**developmental phase** or the phase when students get familiar with a new topic. In this phase, the teacher tries to ensure that students learn what is expected from them,

**fixation phase**, or primary revision which is aimed at consolidating students' knowledge,

diagnostic phase of students' knowledge, competence, skills and habits. At this stage, the teacher needs to identify the degree up to which the students have mastered the topic. Early recognition of the fact that students are not sufficiently familiar with the topic is of great importance in the education process, because if it is necessary, the teacher can explain everything that students feel uncertain about one more time.

**application phase** or the use of knowledge, competences and skills. Students get a chance to apply the knowledge that they have acquired respectively should have acquired to practice.

In relation to the education process it is necessary to include that part too, in which the teacher focuses on evaluating and grading the students. This is the phase when the teacher has the possibility to identify what the students have managed to master from the topic that was covered and also parts of the topic that students are still uncertain about,

that requires further explanation. Thus, an important tool for every teacher can be a detailed analysis of the lesson in which student evaluation and subsequent grading plays a significant role.

So, after checking the number of students present on the lesson and identifying the reason why the missing students are absent, it is appropriate to carry out standard, individual examination from the previous topic right at the beginning of the lesson; it is recommended to keep to this procedure rather than have it unexpectedly. The number of examined students should be indefinite; the teacher should try to provoke a discussion among students. At the beginning of the teaching process (lesson) the teacher also could check by asking some not too complicated, simple questions whether the students know something about the new topic or have some experience with it (for example in case of practice). At the end of the lesson it is recommended to revise; by asking questions the teacher finds out whether the students have understood the new topic.

# 3 The concepts, functions and dimensions of educational evaluation

This chapter demonstrates how the view on evaluation in the education process changes depending on the concepts of teaching. Five current concepts of educational evaluation are identified: the concept of competition in educational evaluation, the concept of non-competition in educational evaluation, the cooperative concept of educational evaluation and relying on domestic literature the humanistic approach and the concept of development in educational evaluation are also introduced. Further, I characterize the different functions of educational evaluation which have gradually emerged as demands grew for evaluation. I offer an inspiring classification of the evaluation function according to the

purpose they fulfil in the educational process: developing-formative function, the function of feedback, informative function, the function of greater efficiency and the differentiating function. By defining the functions of educational evaluation I aim to determine its dimensions, which I consider to be important in order to get a more plastic picture of the process as well as the means and methods applicable in educational evaluation. From this aspect, I further differentiate the personality and social dimensions, the didactic dimension and the social dimension of educational evaluation.

Evaluation in one's life fulfils different functions depending mostly on the purpose, object and subject of evaluation, the environment and the conditions of evaluation. Evaluation conducted at the school is a prerequisite for successful and effective teacher's work. Teachers who realize the potential of its function for the development of students' personality also understand the essence of these functions, and they respect and effectively employ them. Evaluation can encourage students positively towards further work, or, quite the contrary, it can also dissuade them from it. What the effectiveness of the teacher's evaluating actions will be depends largely on how deeply the teacher knows the students, and how their individual values and priorities are respected.

# 3.1 The teacher's attitude to students and the methods of evaluation

Evaluation and classification are the result of testing students, which should be approached by every teacher particularly tactfully in view of the nature and the psychological development of the student. The evaluation of students should be handled responsibly by the teacher as an experienced educator with full level of dedication and concentration. In

general, the teacher's operation can be considered pedagogically tactful if the controlling and educating functions of testing, marking and evaluation are balanced and do not discourage students to continue learning, but rather motivate them further to acquire more knowledge and experience.

Every teacher should impress their students with their teaching skills and the ability to generate motivation for learning. The teacher's attitude to students, the way how the new material is presented, how the lessons are managed or the instructions in practical exercises are demonstrated, often lead to the situation that even those students who so far had shown no interest in a particular subject or lesson start to learn. ask questions and request additional information. In other words, by the open and friendly approach of educators to students, students feel motivated and try to prepare for the lessons more thoroughly and honestly, which obviously has a direct impact on the subsequent evaluation of results. It is then also possible to suggest that a certain chain is created when the student due to the motivation by good evaluation (which was the result of his good answers or scores) begins to learn by himself on a regular basis in an effort to get good marks again. Thus, the student is motivated, which is extremely important in the education process.

### 3.2 New methods of testing and evaluation

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, self-assessment 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, analyze, 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.

### 4 Categories of educational evaluation

The chapter of Categories of the teaching evaluation will focus on the pros and cons of different types of educational evaluation and its impact on the development of students' personality. We highlight the fact that different types of evaluations differ from each other not only by their informational value feedback, but as well as incentives and conative consequences that follow from that information. In this chapter the subject of our analysis will be the presentation methods and forms of educational evaluation in relation to each stage of the evaluation process. In order to score efficiently to fulfil their functions and, ultimately, to make it a means of shaping the student's personality it is necessary to emphasize another important aspect which can also help increase the objectivity of the evaluation, and this is the presence of setting clear, preagreed rules of evaluation, definition, which we will be paying closer attention to in the second subsection. In the third subchapter, entitled The micro level of educational evaluation - the state of research problems, we present a number of research evaluations at today's schools and their results in terms of classes and students from various aspects of looking at the issue under consideration.

Depending on what function evaluation performs, at which stage of teaching it is applied and what volume of information for students it verifies, we distinguish these types of educational evaluations: diagnostic evaluation, formative evaluation, summative (final) evaluation.

The purpose of diagnostic evaluation is to reveal the current status of entry-level skills not only of individual students, but also the whole class, and the social relations between students, as well as learning difficulties and problems of students. Disclosure of these facts allows the elaboration of strategies for education and training, which will be based on the distinct needs of an individual or the whole group, proposes Lappints (2002, 277). This type of evaluation is useful for us, as on the basis of its results we may decide on the degree of differentiation in the group, add the missing information, knowledge, focused on building the necessary competencies, springs Bóta (2005, 197). An experienced teacher, as formulated by Gavora (1999, 29), then relies on the results of diagnostic evaluation and proposes the planning and management of teaching throughout the school year.

According to the extent of exercising the functions of educational evaluation, while applying the horizontal section I expressed bipolar kinds of educational evaluation: cognitive and humanistic, holistic and analytical, quantitative and qualitative, negative and positive, and normative and criterial. In applying the vertical section of the defined, bipolar types of evaluation, the characteristics of summative evaluation crystallized (in terms of cognitive, analytical, quantitative, normative and negative reviews) and formative evaluation (in terms of humanistic, holistic, qualitative, positive, criteria-based evaluation).

#### Conclusion

The views on education in different periods of socio-cultural environment development are gradually changing, which is reflected by the demands of society, the various approaches to the status of teachers, children, students, or undergraduates as well as by the different philosophies of the learning process.

Educational evaluation is one of those educational disciplines, which has its general basis and consists of almost every specialized field of education. It provides feedback, monitoring and the evaluation of the educational process.

One of the main features of educational evaluation is its close connection with the aims and objectives of education and training, particularly with the object of education and pedagogy. It also studies the impact of several factors and conditions on education. Content aspects are based on the curriculum of the requirements for the ethical, professional, aesthetic and physical development of a student.

In the 21st century a knowledge-based, learning society has become an even more important priority. The primary task of the teacher is to create a well-functioning class team in which students successfully achieve goals and meet requirements. All of this requires high quality educational activities from the teacher. S/he must be able to organize, plan, work with students, respect them, solve problems, think critically, be creative and flexible etc. and above all be accountable to their students.

#### The theses of the submitted habilitation thesis

- 1. In recent years, our education system has undergone major changes and has been influenced by the ideas of various educational guidelines, which come from abroad. Due to the rapid development of society the approach to education is changing too.
- 2. The information explosion causes that the main mission of the school ceases to be transferring information to students. Graduates have to take more permanent values from school than knowledge attitudes, interests, motivation, value system, accomplished abilities and skills.
- 3. Every day we get a lot of information from the media and the Internet. The school is unable to convey all this knowledge to students. Its main task becomes to teach students how to search for knowledge, process and apply it in practice. This is the only way to have creative young people who are able to think on their own, solve problems and also who are confident and balanced enough to be successful.
- 4. The shortcomings of the traditional evaluation of students in schools include not respecting the qualities of students, suggesting blocking mechanisms, the lack of harmony between educational requirements and what students themselves consider necessary, the reduction of interpersonal values (signs of cooperation whisperings are punished), reducing creativity (the teacher expects students to learn things by heart), intolerance to individual variations (there is not enough attention paid to talented and weaker students, the teacher teaches on the basis of what the average level of performance in the class is), the interaction between the teacher and the students

- 5. One of the ways to make the school become a place with creative young people, who are able to think on their own, solve problems and are also confident and destined to succeed, is to change evaluation practices and the grading system. Many teachers have already changed their path to this direction by replacing the traditional marking system by verbal evaluation.
- 6. The education process currently does not consider the teacher the only means of transferring knowledge to students but by engaging them in the education process they will acquire a more active approach to obtain knowledge and new skills. Knowledge, abilities and practical skills acquired by students will significantly help them in building their future professional life.
- 7. Without an extensive, objective and reliable evaluation of students' performance, the Slovak educational system cannot solve the key challenges that it is facing: a substantial increase of the quality of education, the democratization and humanization of education, the effective management of education, the achievement of the objectives necessary for the development of our society in the 21st century such as the development of creative skills, the ability to learn and adapt flexibly to the rapidly changing conditions of life, the development of emotional sphere of citizens, etc.
- 8. Evaluation in someone's life plays different roles depending particularly on the aim, object and subject of the evaluation as well as the environment and conditions. Evaluation in school is a prerequisite for the teacher's successful and effective work.

9. Checking the education process consists of measuring the results (examination resp. testing), and evaluating them (evaluation - comparing knowledge, skills, attitudes with some concrete requirements - curriculum, performance standards, learning outcomes). Evaluation includes the grading system too, i.e. having different categories on the basis of performance (mark, number, percentage, portfolio, etc.).

10. Teachers who realize the potential functions of evaluation for the development of students' personality understand the essence of evaluation functions, respect them and use them effectively. Evaluation can encourage students in a positive way for further work, or, conversely discourage them totally. Up to what degree is the teacher able to influence students with evaluation depends on how deeply he knows his students, respects their values and priorities.

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2011-től a Pedagógiai Módszertani Központban a pedagógusok és szaktanárok 1. és 2. atesztációs vizsgáit felügyelő vizsgabizottság tagja.

2011-től a Pedagógiai Módszertani Központban az iskolák és oktatási létesítmények vezető beosztásban lévő pedagógiai alkalmazottai részére tartott képzések (vezetőképzés és innovatív vezetőképzés) vizsgabizottságának elnöke és tagja.

2015-től a Schola nemzetközi konferencia tudományos bizottságának tagja, szervezők: a Dubnicai Technológiai Intézet, a Pädagogische Hochschule Niederösterreich és az International Society for Engineering Pedagogy (IGIP).