

EVALUATION-INTEGRATED AND PERMANENT PROCESS OF THE DIDACTIC APPROACH

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Abstract. The paper analyses the evaluative act from the perspective of modern procedures, emphasizing that the evaluation process is one of the important milestones of the educational act. In this sense, we have presented the complex aspects of the relationship between the evaluator and the evaluated in the teaching activity, drawing attention to some less desirable aspects. As an application, we have studied the case of a reference class, the 8th grade, where besides the recapitulation of previous knowledge, the student takes an important step in the study of mathematics, both in algebra and geometry, it is the moment when complex cognitive processes begin to form, appropriate to age. Assessment of the pupil's knowledge is important from the beginning of the school year, when the initial assessment test can reveal, through its composition, both the percentage of past knowledge accumulation and the future possibilities of development. Here we have introduced the specification matrix in a case study applied comparatively to the experimental and control classes respectively, the results being analyzed and presented including graphically.

MSC 2000. 97D20; 97D60

Key words. evaluative methods, educational forming, educational process, educational objectives, exam

1. INTRODUCTION

We consider evaluation a rather complex process, which can be the subject of debate and research, because it is never enough as we know. We apply the assessment and evaluate in order to find out how big the student's knowledge is. The educational process is the fundamental activity that gives meaning and identity to any school institution. This process affirms the relationship between the educated and the educator, and the evaluation, inherently, targets each of the human agents shown. The evaluative measures are carried out for the level of the educational process, which implies that the evaluation of the teaching is carried out as an action of appreciation of the teaching staff as well as the evaluation of learning and its results, as an appreciative activity on the student. In a broad sense, evaluation refers to that activity through which information is collected, processed and interpreted regarding the state and operation of a system, the results it obtains, an activity that leads to their appreciation based on certain criteria and through which the evolution of the system is influenced. The evaluation carried out by the teacher on the students' results is a particularly complex activity that exerts a profound impact on the beneficiaries both from a pedagogical point of view and from

a psychological and social perspective. The evaluation of school results provides the necessary data in order to adopt the best educational decisions, it appreciates the extent to which the learning results are in accordance with the proposed educational objectives, it aims at the totality of the processes and products that measure the nature and level of the performances achieved by the students. The mathematics teacher takes into account the fact that operational objectives support and determine the structure and type of results which, in turn, converge towards different types of acquisitions obtained, expressed through acquired knowledge, the ability to apply them in the act of training skills and abilities, personality traits, behaviors and intellectual abilities, reflected in reasoning, arguments and interpretations of facts from nature and society.

2. DEONTOLOGICAL ELEMENTS OF EVALUATION IN THE CONTEXT OF INCREASING THE QUALITY OF THE EDUCATIONAL ACT

A complex relationship can be identified between the assessment and the activity of teaching and learning, which explains and guides the educational process, claiming that:

- the evaluation processes to support and stimulate the teaching-learning activity, regardless of the evaluation objectives;
- regulation of the teaching-learning activity based on school results to be carried out continuously and permanently;
- knowing the results and explaining them, predicting the probable results in the following sequences have the role of regulating the didactic process through evaluative actions.

It follows from this, that evaluative actions are present in all didactic activities, regardless of their complexity and dimensions.

The evaluative actions do not overlap the didactic act, but are in a functional interaction relationship. (I.T.Radu, 2005)

2.1. Evaluation concept. According to the Romanian language dictionary, by "evaluating" we mean "determining the approximate value of a good, a thing, the action of valuing, appreciating, estimating" and by "evaluation" we mean the action of evaluating. The evaluation activity has been practiced since the existence of education, under various terminologies: marking, examination, testing, verification. Today, the evaluation was considered to cover two directions:

- (1) A socioeconomic direction, which aims at the efficiency of the education system in terms of the material and financial resources invested in society and the results offered by education (considered as a system), embodied in the degree of training of the workforce.
- (2) A pedagogical direction, aimed at improving the ratio between the objectives expected for the education system and the results obtained by

students. It is understood that what forms the subject of the discussion in this material is the pedagogical direction, which refers not only to the quantification of learning results, but also to the quantification of managerial activity.

Different authors give different meanings to the term:

- (1) Steliana Toma defines evaluation as a process of measuring and applying the value of the results of the education system or part of it, of the efficiency of the resources, conditions and strategies used by comparing the results with the proposed objectives.
- (2) Ioan Jinga defines evaluation as a complex process of comparing the results of the instructional-educational activity with: the planned objectives (quality evaluation), the resources used (efficiency evaluation), previous results (progress evaluation).

It can be concluded that the evaluation involves:

- (1) Process quality (not product quality), so an activity with stages that are completed over time;
- (2) Not only the numerical marking of students;
- (3) Measurements, comparisons, value judgments, based on which certain decisions can be adopted.

As a process, we can assign the following functions to the evaluation:

- (1) Functions of adjusting the system, of improving the activity of optimizing the results;
- (2) Function of prediction, prognosis and orientation, which tries to anticipate the development of the activity in the system;
- (3) Classification and selection function, based on which hierarchies are obtained regarding students, classes and schools;
- (4) Educational function that motivates-raises interest in self-improvement;
- (5) The social function, through which the family (local community) finds out information about the student's results.

2.2. Docimomological aspects. An essential side in the study of evaluation is represented by docimology - the discipline of pedagogy that studies exams, examination methods and examiners. The first work on dimology is "Etudes docimologiques", developed by Henri Pieron and published in 1935. The exam, the central "object" of docimology study, has, like any notional category, advantages (applicability, indications), but also disadvantages. The latter are mainly theoretical opinions that do not in any way affect the role of the exam, which is imperative in any educational process. Among the advantages cited in the pedagogical literature, we note the following:

- (1) Even if there is a large number of dissatisfied people (as a result), the exam is the only way for a society to select and sort its values.
- (2) With all the dose of subjectivism that is attributed to it, it is the only means to achieve a hierarchy of the class, the collective of students.

- (3) Precisely because of its stressful nature, which no one denies, the exam is an opportunity for (self) testing for the individual in order to face some demands of society. By extension, life has a multitude of stressful situations, hard in some places, the completion of which by the individual is irreversible.
- (4) The exam prompts syntheses and integrations of the material that is the subject of the examination by the examiners.

The disadvantages of the exam, according to the pedagogical literature, should be seen as opinions to improve its methodology, not to cancel its necessity. Such opinions will be presented below:

- (1) The exam is an instrument of social immobility, fixing a social status for very long terms; such a possible situation can be opposed by the introduction of periodic professional development activities, which are completed by exams and which confer a socio-professional status consistent with the person's real potential.
- (2) The exam has no predictive value, an idea that is based on some famous cases of personalities from the history of science, who in childhood were regarded as "not adaptable" to the school realities of the moment. For example, the mathematician Evariste Galois, although he died prematurely, developed a theory that prevailed many years after his death. Anatole France, Ch. Darwin, Albert Einstein, L.N. Tolstoy, considered in their childhood as inadequate to the school requirements of the time, later established themselves as great personalities. The correct understanding of the assessment, its shift towards the assessment of competences and not the memorization of irrelevant data, is the sure way to overcome this disadvantage.
- (3) The exam is stressful. The emotional state induced by the exam can affect the results of an exam, but precisely in this lies a quality, that of the selection.
- (4) The exam induces a state of "training", in the sense that certain requirements being known and based on precedents, some examiners master only part of the material to be examined, have only partial information, insufficiently outlined, channeling their efforts only in the directions that the examiner considers to be requested as a priority. The situation is easily correctable, when the examiner offers the candidate the same probability of being examined from each segment of the subject provided by the exam.
- (5) The exam is anti-educational, encouraging fraud (copying) under the threat of failure. But this aspect is also encountered in many situations in everyday life, which an individual can solve in less orthodox ways. Therefore, such an opinion is surely countered by the attention of the examiner, who, by formulating the requirements (subjects) of the

exam, prevents attempted fraud and forces the examiner to act strictly within the limits required by the exam.

- (6) The exam is a matter of chance, a debatable aspect if the exam subject (material) is correctly realized. However, the aspect is significant, admitting that a good part of the examiners will cover, for the exam, only part of the material to be examined.

The pedagogical literature formulates several points of view regarding the factors that influence the decision that the examiner can make during the exam:

- (1) The "halo" effect, a notion introduced by Thorndike in 1920 and which consists of an influence (positive or negative) of a previous assessment on the one that is realized at that moment (it is also called "halo in time"). The halo can also be seen as an influence from the whole to the part, i.e. we appreciate an attribute as positive or negative, depending on the purely subjective impression on the examined person's physique, the impression on his outfit or his possible particularities of expression.
- (2) The "stereotype" effect: a bad paper given at the beginning of the semester (school year) leads to the creation of a (weak) impression that persists over time on the subsequent papers of the respective examiner. The reverse, i.e. the effect produced by a good work, over time, is somewhat rarer.
- (3) The "contrast" effect: in an oral exam, a less prepared candidate is afraid to answer immediately after a well/very well prepared candidate, being almost sure of failure. The opposite situation is also reported, when a well-prepared and well-developed candidate is somewhat not scored by answering an oral exam immediately after a poorly prepared and well-developed candidate.
- (4) The "order" effect: in the case of a longer oral exam (of the order of several hours), without a break, the examiner is more lenient at the beginning and increasingly inflexible towards the end of the exam, as fatigue sets in.
- (5) The "Pygmalion" effect is the effect produced by the contrast between the examiner's expectation of the examiner and the examiner's (real) evolution. Many times, the examiners feel the degree of expectation of the examiner, this operating as an inhibiting factor in many situations.
- (6) The "constant individual error" effect is equivalent to the school jargon expression of categorizing teachers into "good" and "bad".
- (7) The "logical error" effect, which consists in substituting the true objective of the assessment (grading) with other, insignificant ones. For example, the mark is given not for the quality of knowledge, but for diligence or only for encouragement.

Every form of evaluation will answer at the questions:

WHO? (use rating)

- (1) educational agents (student, teacher, parent);
- (2) the labor market.

WHO? (we evaluate)

- (1) all students;
- (2) a certain age group;
- (3) students taken individually.

WHEN? (we evaluate)

- (1) several times a year;
- (2) on fixed dates;
- (3) continuously.

IN WHAT FORMS? (we evaluate)

- (1) in traditional forms;
- (2) in alternative forms.

2.3. *The moments of evaluation.* To be effective, any evaluation activity must go through three stages: design, implementation, evaluation. The didactic strategy also involves the evaluation strategy: when it is evaluated, in what form, with what methods and means, how the information obtained from the evaluation is used. Chronologically, we have:

- initial evaluation (predictive, placement);
- continuous evaluation (along the way, formative, progress);
- final assessment (cumulative, summative, global).

Continuous evaluation is a valuable work tool, offering the teacher the possibility of comparing the stage reached by the students-class, in relation to the stage expected by the (initial) objectives. Regarding the frequency of this assessment, there are multiple points of view, due to the following aspects:

- the educational subjects are provided with a different number of hours, this aspect presupposing different working times with the class;
- the educational subjects are perceived differently by the students;
- the subject to be learned is unevenly distributed throughout a school year;
- the potentials of the classes are very different;
- after completing a training sequence, the following methods are applied, as short-term tests, for: evaluating the achievement of an operational objective, checking and fixing at the end of the lesson, at the beginning of the lesson, with items/objectives from the previous lesson(s).
 - performs the function of diagnosis, making a feed-back, which indicates to the teacher and the students where the obtained results are compared to the projected ones.
 - monitors school progress (allows the teacher to adopt recovery/improvement measures);

- requires students to know the results obtained and the degree of achievement of the objectives.

An important consequence emerges from this, namely that of rhythmic notation, in which case it is useful to eliminate too long intervals between notes (between two consecutive notations). The final evaluation has a high degree of complexity, because it provides the relevant information on the student's level of training. Obviously, no teacher will request an exaggerated volume of data, notions; rather, the requirement at the end of the stage (school year, semester) is that of a volume of data and notions that articulate as harmoniously as possible on a sum of psycho motor skills, resulting from this the profile of the student who "knows":

- To achieve through: theses (semester), annual written papers, colloquiums, practical papers, tests, capacity exams - national tests and baccalaureate;
- It does not allow the improvement of the training-learning process, except for the following series; the results are evaluated in relation to the general objectives of the discipline;
- It is complex, because it must provide the relevant information regarding essential knowledge and how to apply it in new contexts;
- Exercises the function of ascertaining the results of the students and ranking them, one against the other;
- It is done through standardized tests.

In the situation where some subjects do not have a thesis, one can resort to two other methods of summative assessment: laboratory works with increased complexity compared to those carried out in the mixed lesson or tests (of a smaller scale).

2.4. *How do you think the personality of the mathematics teacher must be?*

The mathematics teacher assumes a personality defined by:

- scientific competence;
- managerial competence;
- social competence;
- psycho pedagogical competence.

A good teacher must be capable of a wide variety of didactic styles, to adjust his style by adaptation, depending on the situations encountered, ensuring flexibility and efficiency. The mathematics teacher is creative in designing and conducting lessons only if he has consistent training. pedagogical, methodical and specialized, as well as a wide enough opening to correctly design the didactic act. Achieving a higher yield in the didactic activity is not possible without the knowledge and correct application of the didactic strategies. The heuristic and algorithmic strategies are reinforced by the evaluative-stimulative strategies. In the conditions of an elevated, rigorous and high-performing teaching style, an essential condition is to relate the evaluation to the components of

the didactic act. In this way, the appropriate evaluation tools, methods and techniques must be as flexible as possible, to ensure validity and fidelity, so that the measurement learning outcomes to be real, objective and accurate. The mathematics teacher must be distinguished by:

- professional competency ;
- integrity;
- objectivity;
- confidentiality.

The mathematics teacher must be constantly concerned with school success, which represents a state of concordance between the student's learning capacity and the school requirements, therefore it is necessary to agree the teacher's requests with the students' learning and adaptation capacities them to the school activity, must focus on the alternation between the traditional assessment methods and the complementary ones.

2.5. *The personality of the evaluator teacher.* It is based on two important dimensions that can be linked to the ethics of the evaluative process:

- the dimension of his professionalism, which can be analyzed in terms of the knowledge and skills he has in the field of specialty as well as in the field of evaluative theories and practices;
- the dimension of the attitude he adopts during the evaluative process (aspect that is in a direct relationship with the character and the set of moral values he adheres to, with his attachment to socially accepted values)

3. COMPLETION OF THE INITIAL EXAMINATION IN THE 8TH GRADE. CASE STUDY

3.1. *Analysis of the mathematics curriculum from the perspective of developing an evaluation tool.* From the perspective of the administration of an initial evaluation, We analyzed the 8th grade curriculum, making a correlation between the framework objectives and the reference ones that We opted for in the evaluation development.

4. COMPLETION OF THE INITIAL EXAMINATION IN THE 8TH GRADE. CASE STUDY

4.1. *Initial assessment, class VIII.* For the design of the initial evaluation sample, we went through the following stages:

- Establishing the purpose of the assessment test: carrying out a diagnosis regarding the level of knowledge and the ability to apply it of students of the VIIIth grade A with a prognostic function, for the establishment of didactic strategies in the study of mathematics during the VIIIth grade.

FRAMEWORK OBJECTIVES	REFERENCE OBJECTIVES	OBJECTIVES OF EVALUATION
I. Knowing and understanding the concepts, terminology and calculation procedures specific to mathematics	1.1 to write, read, compare and represent real numbers on the axis 1.2 to perform calculations with real numbers, using calculation rules and the properties of operations 1.5 to use numerical or algebraic calculation elements to simplify some calculations, to simplify some calculations, to solve some equations or inequalities 1.6 to recognize and describe flat geometric figures in various configurations, to use locations and relative positions in solving problems 1.7 to use the qualitative and metric properties of geometric figures in solving some problems	O1 O2 O5 O6 O7 O9
II. Development of exploration/investigation and problem-solving skills	2.1 to explore ways of decomposing real numbers using the studied operations 2.2 to investigate the truth value of some statements, to select the relevant information from the multitude of data at their disposal, to formulate as many possible consequences as possible, arising from a set of given analyses. 2.3 to determine, using appropriate methods (measurement and/or calculation), lengths of segments, measures of angles and areas, to estimate lengths, measures of angles and areas.	O1 O3 O5 O6
III. Developing the ability to communicate using mathematical language	3.1 to identify and structure the stages of a mathematical reasoning presented in different forms 3.2 to coherently present the solution to a problem using various ways of expression	O5 O8 O9 O10
IV. The development of interest and motivation for the study of mathematics and the application of mathematics in various contexts	4.1 to identify uses of some studied mathematical concepts and methods to solve problematic situations or practical problems 4.2 to show perseverance and interest in finding new solutions to solve a problem.	O10 O11 O12

Fig. 4.1 – Objectives Correlation

- Specifying the objectives targeted by the assessment:
 - O1. To determine the sum of two real numbers
 - O2. To compare two real numbers
 - O3. To solve equations of the first degree in \mathbb{R}
 - O4. To calculate the perimeter of a triangle of the given side
 - O5. To draw geometric figures: any triangle, equilateral
 - O6. To recognize and correctly apply the abbreviated calculation formulas
 - O7. To perform operations with real numbers: bringing fractions to

**INITIAL ASSESSMENT TEST
CLASS VIII A**

I. Fill in the dotted spaces:

1. (5p) The result of the calculation $3\sqrt{2} + \sqrt{2}$ is equal to...
2. (5p) Among the numbers 5 and $\sqrt{5}$, the natural number is ...
3. (5p) The geometric mean of the numbers 4 and 12 is equal to...
4. (7p) The real solution of the equation $2x + 5 = 19$ is equal to...
5. (7p) The result of the calculation $7x - (5x - 9x)$ is equal to...
6. (7p) The perimeter of the equilateral triangle with a side of 10 cm is equal to ...cm.
7. (7p) The triangle ABC with $m\angle A = 90^\circ$, AB = 4 cm and AC = 3 cm has hypotenuse BC equal to...cm.
8. (7p) In triangle ABC, points M and N belong to sides AB and AC, respectively. The line MN is parallel to the line BC, AB = 8 cm, AC = 12 cm, AM = 6 cm. Calculating the length of the NC segment yields:

A. 2 cm B. 9 cm C. 3 cm D. 6 cm

II. Write the complete solutions:

1. (7p) a) Calculate the value of the number $n = (2\sqrt{2} + 1)^2 - (1 - \sqrt{2})^2$
 (7p) b) Solve the equation in the set of real numbers $x^2 = 81$
2. (5p) a) Calculate $\frac{1}{2 + \sqrt{5}} + \frac{1}{2 - \sqrt{5}} =$
 (5p) b) Calculate the arithmetic mean of numbers $a = 2 + \sqrt{5}$ and $b = 2 - \sqrt{5}$
3. In the isosceles trapezoid ABCD with AD = BC, the height is congruent with the small base and has a length of 6 cm, and $\sin(A) = 0.6$.
 (5p) a) Calculate the perimeter of the trapezoid.
 (5p) b) Calculate the area of the trapezoid
 (6p) c) Calculate the length of the segment determined by the diagonals on the middle line of the trapezoid.

Fig. 4.2 – Initial Test

the same denominator, applying formulas

O8. To determine the arithmetic mean of two real numbers by correctly applying the mean formula

O9. To draw an isosceles trapezoid using the given notations

O10. To calculate the perimeter of the isosceles trapezoid, by replacing the terms

O11. To correctly apply the trapezoid area formula

O12. To calculate the length of the segment formed by the diagonals on the middle line of the trapezoid using the formula.

- Establishing the contents subject to verification:

C₁) REAL NUMBERS: comparison, calculation rules with radicals, operations with real numbers, equations of the form $ax + b = 0$, $a, b \in \mathbb{R}$, $x^2 = a$, $a \in \mathbb{Q}^+$, abbreviated calculation formulas.

C₂) ELEMENTS OF GEOMETRY: drawing some geometric figures, their recognition, calculating the length of

NO. ITEM	1	2	3	4	5	6	7	8
SOLVING ITEM	$4\sqrt{2}$	5	$\sqrt{48} = 4\sqrt{3}$	7	$11x$	30	5	3
SCORE	5p	5p	5p	7p	7p	7p	7p	7p
Objectives of assessed	Units of content	Items (sample)	The correction scale					Scores (points)
O6	CI	I 9. a	Writing abbreviated calculation formulas					2
	CI		Applying the formulas: $n =$ $(2\sqrt{2})^2 + 2 \cdot 2\sqrt{2} \cdot 1 + 1^2 - (1^2 - 2 \cdot 1 \cdot \sqrt{2} + \sqrt{2}^2)$					2
	CI		Completion: $n = 6\sqrt{2} + 6$					3
O3	CI	I 9. b	$x^2 - 81 = 0$					2
	CI		$(x-9)(x+9)=0$					2
	CI		Completion: $x = \pm 9$					3
O7	CI	I 10. a	Bringing fractions to a common denominator:					1
O1	CI		$\frac{1}{2+\sqrt{5}} + \frac{1}{2-\sqrt{5}} = \frac{2-\sqrt{5}+2+\sqrt{5}}{2^2-\sqrt{5}^2} =$					2
	CI		Completion: $= -4$					2
O8	CI	I 10. b	Writing the formula: $m_x = \frac{a+b}{2}$					1
	CI		Replacing terms a and b					2
	CI		Completion: $m_x = 2$					2
O4	CII	I 11. a	Writing the perimeter formula:					1
O9	CII		Determination of $AB = 10$ cm					1
O10	CII		$AD = 22$ cm					1
	CII		Completion: $P = 48$ cm					2
O11	CII	I 11. b	Writing the trapezoid area formula:					2
O5	CII		Replacement of terms:					1
	CII		Completion: $A = 72$ cm					2
O12	CII	I 11. c	Writing the segment length formula: $\frac{B-b}{2}$					3
	CII		Completion: $= 8$ cm					3

Fig. 4.3 – Scoring Scale

a side, the perimeter and the area of a geometric figure; metric relations in the right triangle; notions of trigonometry.

Note:

1. All subjects are mandatory.
2. Effective working time 50 min.
3. 10 points are awarded automatically.

4.2. *Development of the correction and scoring scale of the evaluation tool.* In the following, there is presented the correction and scoring scale.

- Note:

In exercises 18, the maximum score is awarded for the correct result or 0 points. Any other correct solution to exercises 9 - 11, other than the one on the scale, leads to the awarding of the maximum score.

Contents- Objectives	Information acquisition	Understanding	Application	Analyze	Synthesis	Evaluation	Total
I. Real numbers: -comparison - rules for calculating with radicals - solving equations - abbreviated calculation formulas		6.7(1)	26.7(4) 13.3(2) 13.3(2)				
Total I	-	6.7(1)	53.3(8)	-	-	-	60(9)
II. Elements of geometry: -analyzing the properties of a geometric figure - calculation of the length of a side, the perimeter and the figure area - metric relations in the right triangle - notions of trigonometry	13.3(2)		13.3(2)	6.7(1)		6.7(1)	
Total II	13.3(2)	-	13.3(2)	6.7(1)	6.7(1)	-	40(6)
Total	13.3(2)	6.7(1)	66.6(10)	6.7(1)	6.7(1)	-	100(15)

Fig. 4.4 – Specifications matrix

No.	O1		O2		O3		O4		O5		O6	
	Maximum score	% realized	Maximum score	% realized	Maximum score	% realized	Maximum score	% realized	Maximum score	% realized	Maximum score	% realized
28	0,5	95	0,5	85	2	82	2	94	2	76	2	70
30	0,5	100	0,5	95	2	95	2	100	2	87	2	85

Fig. 4.5 – Results of the initial test administration

- Specifications matrix:
Building the specifications matrix involves establishing correspondences between objectives and contents

4.3. Analysis of the results of the administration of the initial test. Depending on the objectives we have proposed above, we assessed the students' results using two samples: A a control sample (a class of 28 students from the last school year: VIII B) B an experimental sample (class of 30 students from the actual school year: VIII A) The students from the two samples had basically the same conditions for the educational instructional process, and the intellectual capacity is similar. The results obtained by the students of the two classes are included in the table.

4.4. The conclusions of the experiment. It was found that in the control class the average per class was 8.06, and in the experimental class the average per class was 8.83, with a shift of the maximum towards higher grades. In the evaluation tests, the results by value groups give better information.

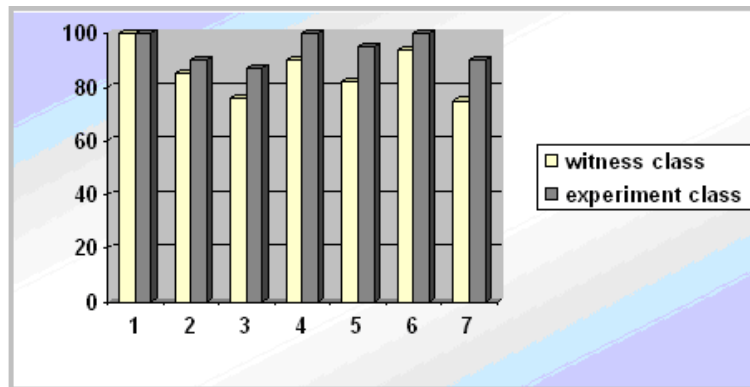


Fig. 4.6 – Graph of the results

Note	Students	%
10	7	25,00%
9	15	53,57%
8	5	17,86%
7	2	7,14%
6	1	3,57%
5	0	0,00%
4	0	0,00%

Note	Students	%
10	3	10,71%
9	15	53,57%
8	2	7,14%
7	5	17,86%
6	1	3,57%
5	2	7,14%
4	0	0,00%

Experiment class

Witness class

Fig. 4.7 – Statistical results

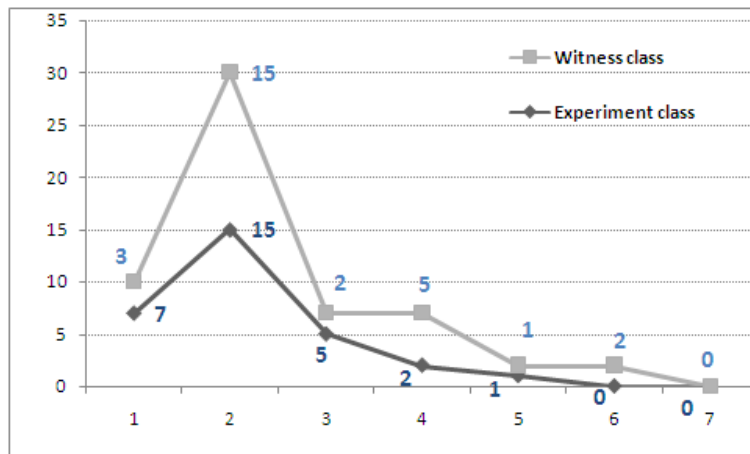


Fig. 4.8 – Comparing the statistical results

GROUP	4-5,99	6-6,99	7-7,99	8-8,99	9-10]
Experiment class	0,00%	3,33%	6,67%	16,67%	73,33%
Witness class	7,14%	3,57%	17,86%	7,14%	64,29%

Fig. 4.9 – Test results by value groups

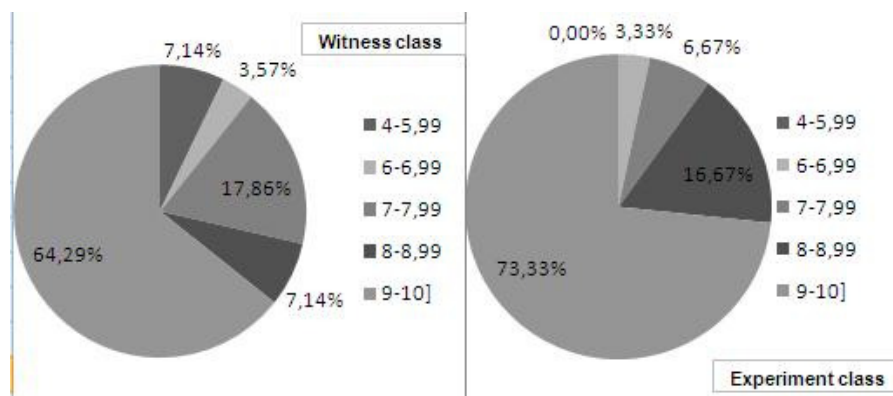


Fig. 4.10 – Test results in percentages

5. CONCLUSIONS

The evaluation of the school results of the students must be as objective as possible, perfectly objective evaluations representing a perpetual aspiration of the evaluators. The evaluation process involves carrying out several operations, aimed at measuring, interpreting and evaluating the obtained data, as well as making decisions. Evaluation is the process by which it is established whether the educational system fulfills its functions, whether the proposed objectives are achieved. When evaluating, let's not forget that: **success is measured not in relation to global successes, but in relation to the successes of each individual.**

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