

Principles of evaluation of knowledge in secondary education

TERMINOLOGICAL DELIMITATIONS

The evaluation in education represents a permanent concern of theoretical and practical teachers, becoming the object of numerous debates and researches. The problems of evaluation have become central in education, implying not only the specific activity of this kind but also many other components of educational practice in tight connection with evaluation.

In the specialized literature, we can find several definitions of evaluation. We will mention some of them [1].

Evaluation is a process of measurement and estimation of the results of educational and teaching system, or a small part of it, of the efficiency of the results, conditions and strategies used by comparing the results with the targeted objectives, in order to make decisions of improvement and perfection.

Evaluation in education is a process of acquiring information - about the student, about the professor or about the educational program - and of capitalization of these results in elaboration of an estimation, which, as consequence, will be used in the adoption of these decisions. The information forms the base of the evaluation process; the estimations regard the present situation or predict the future results; decisions are options for certain ways of action.

Evaluation is a complex process of comparing the results of educational activities with the targeted objectives (evaluation of quality), with the used resources (evaluation of efficiency) or with the previous results (evaluation of progress).

Educational evaluation represents a complex action, integrated with the educational activity (of teaching-learning-evaluation) by correlation of educational operations of *measurement* and *estimation*, which assures the *diagnosis*, with the *decision*, which implies the *prognosis*- with self-regulating goal at the level of educational system and process.

As summary one can notice that:

- Evaluation is a process (not a product), thus a gradual activity accomplished in time;
- It is not limited to student grading (which is a numerical expression of assessment of their school performances), but regards more complex fields and issues (including educational programs and the system as a whole);
- Evaluation involves a series of measures, comparisons, estimations, that serve the base for certain decisions meant for the optimization of the activity or the fields subject to evaluation.

The establishment of an evaluation strategy in education implies the following questions:

- *When is the evaluation accomplished;*
- *In what form is the evaluation accomplished;*
- *What are the used methods and means;*

- *How is the obtained information capitalized, etc.*

Development of researches in the field of evaluation is accompanied by a continuous development of the terminology. The literature specialized in evaluation impresses by its diversity, but also by the ambiguity of used vocabulary. It frequently operates with terms such as “initial evaluation”, “summary evaluation”, “detailed evaluation”, “progress evaluation”, “criteria evaluation”, “diagnostic” or “prognostic evaluation”, “test”, including “summary test” or “final test”. Many terms are synonyms, or are different but not opposed, or different but not categorically delimited.

We will define some frequently used terms [4].

- *Efficacy* defines the quality to produce the expected (positive) effect, that is the estimation of an activity based on the relationship between the accomplished results and targeted objectives (expected results). In case that the products of an activity are close to the objectives (or better), the particular action is considered to be effective (high quality). The evaluation of efficiency of education was capitalized especially by the promotion of an education focused on educational objectives.
- *Efficiency* is the relationship between the sum of the effects of an action on one side, and totality of used resources on the other. At the level of national economy, the economic efficiency of production is reflected, in essence, in the productivity of social labor. That means that the educational activity can be efficient if we consider that the results that it produces are in accordance with its conditions and resources, though it is possible that its effectiveness is weak, because it did not lead to the achievement of targeted objectives.
- *Progress* defines the relationship between the results achieved in the given time and the previous results.

School effectiveness. Because any activity generates a relationship between input elements and the results, as well as between these and the accomplished process, the term signifies the achieved results. Therefore, the “effect” of an activity is a synonym with the “output”, if it has different meanings depending on the determinant situation. For instance, the thing, that in a given time of educational activity represents an “output”, can at the same time constitute the object of evaluation as “input” in a superior level (initial evaluations). Some authors believe that the term “school effectiveness” is synonym with “productivity”, a fact that implies the establishment of a relationship between the quantity of used resources and the quality of obtained products. The productivity of a process becomes higher if the same amount of products is obtained with a more reduced amount of resources. In many instances, the school effectiveness is defined as results in relationship with targeted objectives. In these cases, some authors suggest to use the term “performance” meaning the optimal results in an optimal time. The performance is the expression of the level of accomplishment of an educational task. Therefore, the effectiveness is interpreted in relationship with the resources, efficacy- in relationship with the purpose (objectives). **Schools losses or unsatisfactory results** of activity, specified in various categories of failures: school abandonment, repetition, second examination, temporary failures, difficulty of integration and adaptation (with the school activity and/or with social life), etc.

- **Diagnostic evaluation.** Diagnosis envisions a situation, a state of a phenomenon, emphasizing its essential features. The diagnostic evaluation does not look at specific parts of the situation, but considers the organized totality of a situation, i.e. a totality

of behaviors and not acquired knowledge. It highlights the successful aspects of education, but also the critical ones, mismanaged areas, as well as difficulties in learning, representing the necessary condition for the accomplishment of an action of authentic improvement of the situation of evaluated phenomenon.

- **Predictive evaluation** signifies the evaluation of some performances achieved by subjects, which represent the support for other performances in the subsequent period. It is demonstrated in the evaluations accomplished at the beginning of an educational program- initial evaluations, as in the context of admission contest, with the goal to determine if the subjects have the training (knowledge, capacities, abilities) needed in order to be successful in the next phase. A necessary condition for a predictive evaluation is the emphasis on the achieved performances (knowledge, capacities) which has an impact on the successes from the subsequent phases. When there is no direct relationship between the acquired knowledge and the subsequent requirements, the predictive value of evaluation is greatly reduced. A concluding example is the situation when the successes at an admission contest, which excessively emphasizes the acquired information, are followed by poor results, sometimes even failure, in the next educational level that emphasizes the abilities. In this sense, we experience the phenomenon of “falling prizewinners.”

Types of exams. Depending on the targeted goals, we can distinguish several types of exams:

National exams. The syntagma “national exam” is used in specialized literature when the following conditions are met:

- Responsibility for planning, administration, estimation, and communication of exam results is assumed by a nationwide recognized organization, which could be governmental (for example, administrative structure responsible for education) or nongovernmental (for example, an organization specialized in activities of this kind);
- Significant proportions of school groups are exposed to exams, to interfaces between educational cycles, especially between the inferior and superior secondary education or between these and postsecondary education;
- The contents of tests and used testing techniques, just like in case of criteria and procedures of estimation, are identical for each component of exam, even though different organizations are responsible for one or the other;
- The exam tests the already covered curricular components, frequently of a national curriculum;
- The general concept, which lies at the base of exam planning, as well as approached educational results, influences retroactively the educational process;
- The exam results influence the individual destinies of candidates, being able or failing to offer “chances for life.”

Graduation exams or certification exams, such as assessment exam at the end of general school; the baccalaureate.

Orientation and selection exams are the exams, as a rule for admission to the non-compulsory educational institutions. In our educational system, admission to secondary, postsecondary, higher education is performed through contest exams.

The baccalaureate is the most important exam representing at the same time review and orientation. To what regards the way the exam is organized and carried out, the baccalaureate presents a rather varied scene in different educational systems.

From the *organizational* perspective, the baccalaureate examination is:

- A unique exam, for example in Romania;
- A multiphase exam, for example in England and France.

From the perspective of *composition of commissions* of these exams, we can distinguish between:

- External exams, taken in presence of other professors than those who trained the candidates in order to provide a better objectivity of evaluations;
- Internal exams (taken in presence of professors who trained the candidates, as well as other professors).

From the perspective of accomplished *functions* of exams:

- Review, as well as selection exams - in countries where the admission to higher education institutions is accomplished without contests ;
- Exams with a predominantly review character, conclusion of studies.

International baccalaureate. The “international baccalaureate” promoted by the International Baccalaureate Association with the headquarters in Geneva has a special place in the examination system. The program of this association includes the development of some versions of curriculum for secondary institutions, acceptable for more countries. At the beginning, the educational institutions from different countries that used it were the institutions designed for the children of citizens with temporary jobs in other countries (diplomats, other specialists). Having a unique curriculum, which goes beyond national boundaries, the successful passing of exam offers the possibility to continue the studies in the higher education institutions from the member countries that “recognize” this exam.

The curriculum of the exam includes contents from general education, which imply that training of intellectual instruments necessary for any professional development, which does not lack elements of national cultural patrimony and the culture of other nations. Students learn to understand them, as well as a wide range of options that offer the individual the possibility to choose what corresponds to its interests and aptitudes.

The functions of evaluation

The functions relate to tasks, objectives, the role and destination of evaluation. The evaluation performs the following functions [6]: a) educational; b) selective and competitive; c) diagnostic and prognostic; d) cybernetic or feedback; e) social and economic.

- The educational function.*** It is the most specific and the most important function of evaluation, with the goal to stimulate the achievement of higher performances in training of students, as a consequence of psycho-motivational and social influences of the results obtained through evaluation. The accomplishment of educational function requires the acknowledgement of the results of evaluation in cases of success, failures and school mediocrity.
- The selective function.*** This is the function of competition, which assures the hierarchy and classification of students according to the values and performances within the study group.
- The establishment, diagnostic and prognostic functions.*** The assertion function signifies the recognition of the state of phenomenon, its activity and results, accompanied by the estimation established through some criteria. This

function emphasizes the importance of measurement of evaluated phenomenon and the precision of accomplished measurements.

The diagnostics function signifies the emphasis of conditions, factors that generated the established situation. It explains the existent situation. The simple knowledge of this phenomenon at the time of evaluation without emphasizing the factors that generated it does not allow its true improvement. The diagnostic function, based on tests, emphasizes the value, the level and the performances of student training at the given time: term, academic year, study cycle, etc.

The prognostic function- based on the analysis of data provided by the diagnosis in comparison with objectives and requirements of school documents (study plan, analytical program, schoolbook, professor teachings), foresees the value, level and performances that are likely to be achieved by the student in the next training phase.

- d) **Cybernetic and feedback function** (of adjustment and self-adjustment). The analysis of the purposes of education- the results of students training, highlighted by evaluation and grading, i.e. the outputs, which is used in the establishment of the range of correction of inputs, stipulates the optimization of the teaching-learning process using the feedback principle.
- e) **Social and economic function.** This function relates to and emphasizes the efficiency of education at the macro-socioeconomic level, which influences the decisions of decision makers regarding the development and improvement of education depending on the value and quality of school “product” – “individual trained through studies”, which assures the placement of “trained man at the right place”, of course based on contest.

THE PRESENT SITUATION OF EVALUATION IN SOME COUNTRIES FROM CENTRAL EUROPE

Modifications in school programs, methods of teaching and training must also involve modifications in evaluation methods. The old evaluation system usually focuses on the “factualism.”

Good methods of evaluation and confirmation of knowledge represent an important component of the educational system, oriented towards the satisfaction of interests of all the children. The ministries of education need an instrument that would allow them to evaluate the activity of schools and to elaborate the educational policy based on real data about the successes of students. The students should have the possibility to demonstrate their level of performances in education in case of an attempt to continue the studies or in case of employment. The evaluation system must be transparent and credible in order to assure that the students with the same performances obtain same results and respective certificates regardless of the social status of their parents. The system must exclude the possibility of teachers to manipulate in favor of a school or a student.

The state evaluation systems from the countries of Central and Eastern Europe and from the former Soviet Union generally do not meet these requirements and need an essential reform. The main requirements set forth by the graduates do not offer them practically any facilities from the perspective of social status. For example, the universities ignore them and organize their admission exams, a fact that doubles the student efforts being at the same time useless.

The educational systems from the past, which were extremely centralized, were based on the possibilities to predict the results. They lacked an external system for organization of evaluation and examination. The ministries did not participate actively in exam organization, in determination of grading criteria, in evaluation of the quality of student knowledge and abilities. This situation was also maintained in many present decentralized educational systems.

In many countries, the evaluation of knowledge is very intense, being organized, in most of the cases, in verbal form. Even in this case, the student grading is not based on certain established criteria. Usually the professors have their own evaluation criteria. Due to this fact, the grade (mark) given by different professors from the same school, moreover from different schools, have different significance. The evaluations and examinations are often accomplished at a low technical level because the quality of evaluation instruments (validity, fidelity, objectivity, applicability) often do not correspond to the requirements, the difficulty level of the subjects may essentially differ from year to year. In case of these systems, the possibility for fraud is rather high.

The main advantage of these evaluation systems is their low cost. Often the ministries do not bear any expenses for the organization of exams. In some countries, for example in Georgia and Moldova, the exam topics are broadcasted on the radio and the students write them down in their notebooks. It is obvious that this method limits the character and the format of examination subjects (it is impossible to use charts, graphs, tables and maps). In addition, many countries that use the question cards emphasize the reproductive aspect verifying the “factualism” and not the ability of critical thinking and the ability to solve the problems, necessary for graduates for survival in the conditions of market economy.

Some countries have launched projects to reform the evaluation systems. One of the first was the project launched by the government of Romania in 1994. The basic tasks are training evaluation specialists, creation of a national evaluation and examinations service. The main problem was related to the creation and the status of examination service. Slovenia has managed (without an external financial support) to implement new methods for the graduation exams in three years. The first examinations based on the new format were held in 1995. The universities reached an agreement to recognize the graduation exam as the only base for selection for the higher education. In order to accomplish this, a new evaluation staff was trained, the national examination center was created, small but endowed with professional staff and modern equipment, with its own budget and with an administration council directly subordinated to the minister of education.

The main factors necessary for the successful accomplishment of reforms within the evaluation system depend on the agreement of all the parties regarding the necessity of reforms; a firm reform policy; possibilities for financing of activities during the entire period of time; existence of a local potential for training the necessary professional staff; ability to implement the experiences of other countries; organization of a large scale publicity campaign about the reforms.

SYSTEMS OF EVALUATION OF THE QUALITY OF EDUCATION IN SOME DEVELOPED COUNTRIES

The diversity of ways the syntagma “quality of education” is used, makes less probable the existence (even in developed countries) of some “systems” of quality

evaluation, meaning some totalities of components that work in coordination for the achievement of a set of common objectives.

Indeed, what we want to mention is the existence in these countries of some “*structures*” of *evaluation approaches* and resources explicitly or implicitly associated with the quality of education, complex enough to be considered *independent* systems, up to the moment of coordination of their functioning [3].

England

National exams in England and Wales represent from several perspectives *remarkable examples* of practicing by professionals of some technical, but also ethical, principles and desiderata.

Children go to “*primary*” schools starting with the age of five and continue it up to the age of eleven.

Lower secondary education theoretically includes (according to the provisions of the Education Act from 1944) three types of school , namely *vocational schools*, *secondary modern schools* and *grammar schools* for children with higher intellectual abilities.

In practice, due to the high costs associated with the existence of technical schools, as well as reduced popularity among students, technical schools have never been a significant component of the lower secondary education.

On the other side, the consensus reached in the 60’s regarding the inopportunity of a selection exam at the age of eleven (for *grammar schools*) led to a gradual generalization of *comprehensive schools*, designed to provide the same kind of education for all the children above the age of eleven.

One or two grammar schools have survived in almost every educational district, some of them opting for financial independence assured by the charge of education fees and renouncing the governmental financing, provided with the expressed condition of nonselective enrollment of students.

The real situation is that for most of the students from the compulsory education, the *real* educational offer is identical, being composed of primary and then comprehensive schools, the alternatives with a marginal share including the *grammar schools*, also called independent schools.

Higher secondary education is more diverse, being able to accomplish a flexible adaptation to the interests and vocational options of the students, their main accessible channels being:

- The continuation of studies for two more years in schools where they are enrolled, in order to obtain a certificate necessary for the access to higher education (“academic” channel);
- The continuation of the studies for two more years in other educational institutions (“third-party” colleges), in order to obtain the certificate necessary for the access to higher education (“academic” channel);
- The continuation of studies in educational institutions (Further Education College) which provides professional training necessary for an eventual employment in a specialized position, or taking general courses;
- The combination of studies with employment, either internships within a company, or professional trainings organized and financed by the state (the channel that issues a certificate of professional qualification).

Until the 50's, only a limited part of student groups at the age of sixteen, namely the ones with "academic" abilities, participated in the national exams (frequently called "public"), that used to have a disciplinary configuration, the choice of subjects for the examinations being dependent primarily on the interests and options of the students.

Subsequently, the percentage of students wishing to take these exams increased, so that presently 90 percent of the age group is examined in several disciplines.

The increased demand for this kind of exams led to the development of two distinct exams in the 60's:

- The *General Certificate Of Education* (GCE) could be obtained by students with developed "scholastic" aptitudes, following the participation in exams planned using increased standards;
- The *Certificate of Secondary Education* (CSE) could be obtained by students with less developed scholastic aptitudes, following the participation in exams planned using average standards.

Both exams had a "disciplinary" configuration and the typical requirement for the employment or for the access to a course of professional development could be "... five GCE, including English and mathematics."

The 80's witnessed the replacement of the dual system with a unique exam, involving the entire age group, General Certificate of Secondary Education (GCSE).

In this exam, which also had a disciplinary configuration, the results for each discipline are expressed in grades represented by letters- "A" being the best result. The candidates who wish to obtain higher grades opt for tests of increased difficulty, or additional tests covering wider topics.

Usually the candidates associated with this age group opt for exams in *five* or *six* disciplines. The so-called *A-levels* are placed at the interface between the higher secondary education and postsecondary education or, eventually, the beginning of active professional life.

The thing that differentiates these exams from the appropriate procedures from other developed European countries is the *high a level of specialization*. This means that the British students study only *three* or *four* disciplines in higher secondary education, opting frequently either for combinations of humanities, as for example English, history and French, or for combinations of sciences, for example physics, chemistry and mathematics.

The recent evolutions, which mark some deviations from the above-mentioned structures, occur primarily because of increase of popularity for some "bridge" disciplines, such as economics, and not exactly because of the weakening demarcation operated by the candidates between the sciences and humanities.

The specialization of higher secondary education mentioned above, on one side, and the remarkable technical quality of "A-level" exams on the other, have two noticeable consequences:

- The universities use the results of these exams for selection of the candidates;
- The length of study for a bachelor diploma is only three years.

The attempts to increase the number of disciplines studied in the higher secondary education and "A-Level" disciplines have not been successful, due to the implications related to the cost of education (the necessity to extend the length of study in the higher education in order to achieve an equivalent level of training of the graduates), as well as due to the widespread perception that the present number of disciplines studied at the "A-Level" leads to higher quality results.

It should be however mentioned that the new type of exams, *Advanced Supplementary* (AS), which cover half of the required content for the “A-Level” exams, having a comparable complexity. Six Advance Supplementary exams will be thus equivalent to three A-Level exams.

The demand for this type of exam is not yet very extended, partly because of the uncertainty among students and schools regarding the attitude of universities, and partly because of logistical problems related to the doubling of discipline number taught in a school.

If the national exams are planned and administered by “*Examination Boards*”, which benefit from a special status, semi-official and at the same time semi-independent, explained probably for the fact that the first institutions of this kind, that appeared a century ago, were associated to some universities and prepared the exams (at that particular time) that served the base for decisions regarding the admission of the candidates.

In the period when the dual system of exams was used, GCE and CSE (see above), the Examination Boards were specialized in one or the other.

Presently, they have a tendency to form groups or consortiums, competing for planning and administration of exams at the level of disciplines.

Being placed in different areas of the country, they usually plan and administer exams in limitrophe geographic regions.

The schools have the freedom to choose an examination board or a group of boards, or even go for groups of boards or different agencies for different examined disciplines.

This form of freedom is effectively used depending on the preferences of different departments for a certain *syllabus*¹ or for a certain method of examination.

In the 80’s, a series of centralist events took place unprecedented in the British education from this century.

Furthermore, were created two *central bodies* appointed by the government to establish the criteria for the syllabuses and standards for the examination methods in national exams to which all the examination boards should conform.

These are the *National Curriculum Council* (NCC) and *Schools Assessment Examinations Council* (SEAC).

The criteria established by these bodies are presently amended by the highly detailed provisions of the first “national curriculum” of the British education.

A consolidating tendency presently is the development by the lead industry bodies of some “vocational national standards,” supervised by the *National Council for Vocational Qualifications*: the exams of vocational qualification planned and administered by institutions such as *City and Guilds of London Institute*, *Royal Society of Arts*, *Institute of Bankers* or *Business and Technician Education Council*, have a tendency to transform into *national vocational exams*.

With the regard to national exams from Great Britain, two particularly relevant situations should be remarked:

- The exams results are statistically analyzed, using sophisticated data processing software and high-performance computers and is accomplished not only through the assembly of partial data in order to construct an image of the quality of

¹ In the British educational system *syllabus* means the document with a pronounced contractual character that the examination boards use in order to timely communicate to the potential candidates about the tested *knowledge and abilities*, the *ways* these would be examined (sometimes even providing samples of potentially used tests), the *thematic context* of examination (specifying chapters, sequences, or other content).

education, but also through the analysis of behavior of different components of exams, formulating conclusions regarding the validity, fidelity, level of discrimination of the used tests;

- Publishing of reports regarding the accomplishment of examinations and their distribution among a large number of potentially interested groups and organizations, as well as among the large public, thus creating the necessary transparency for some debates, which favor the timely improvement of exams.

Japan

Among the graduates of secondary education, 50 percent of males and 12 percent of females seek admission to the higher education, entering the “hell of exams” and adopting different strategies such as attendance of the best private schools or parallel attendance of courses within some *additional schools* “juku”, the maintenance for several years of the “ronin” status while attending some other schools for exam preparation (“yobiko”) in the hope to take these exams in the future.

“Yonto-goroku”- the principle that says if you sleep only four hours a day you will be able to pass the exams and if you sleep five hours a day- you will fail, expresses significantly the workload and the stress associated with the system of national exams from Japan.

Between 1947 and 1968, universities conditioned the admission according to the results of an “aptitude test” inspired from the American educational system (until 1954), and then according to the results of an “ability test.”

After a period of probing in the quest for new formula, beginning with 1979 the local universities, as well as the national ones started to use the results of a “common exam” at the end of secondary education. This exam lasted an entire day and included seven components in five different fields: Japanese, a foreign language, mathematics; two components in social sciences; two components in nature sciences.

The grades for this exam were given after a statistical treatment of the obtained scores.

In order to get access to the higher education, the candidates, after the “common exam,” had to take one more and starting with 1987- two more exams, chosen by the departments of different universities.

Within this system, in 1987 over 1 million of candidates tried to get access to the higher education, 394,000 passed the “common exam” and 112,000 were admitted to the finals. After many critics regarding the excessive efforts of the candidates, beginning with 1990 the Ministry of Education establishes a new “common exam” (“shintesuto”), planned and administered by the National Center for Admission Exams for Universities.

In addition, this exam includes the fields of content covered in higher secondary education and uses objective testing techniques. Unlike the previous exam, it had to accomplish the functions of the first of the two supplementary exams previously used by departments.

In addition, the candidates were allowed to approach selectively the five previously compulsory domains even having the possibility to choose one single domain. The adoption of this system implies, on one hand, to reduce the excessive load of intellectual effort and stress, and on the other hand, to encourage to universities to associate in planning and administration of some unique admission exams, in case that they want to use some additional selection procedures.

France

France is particularly credited with the “invention” of the certificate obtained through a non-competitive national exam, certificate that represents a sufficient condition for the admission to the higher education. The baccalaureate exam, instituted by Napoleon in 1808, was initially conceived as an instrument for consolidation of national unity, as a consistent procedure for testing individual abilities and as a mean for stopping the waste of individual potential, inherent to nepotism and favoritism.

If we leave aside the discussions related to the historical role of baccalaureate in the preservation of bourgeoisie, or, on the contrary, in the leveling of class differences, we should mention that the baccalaureate was also considered as a way of highlighting the ideal of equality in relationship with education, by providing the uniformity of preliminary procedures for diploma issuing.

The more recent analyses highlight the role of baccalaureate in the maintenance of the homogeneity of educational standards and practices at the national level.

The attempts to reform the baccalaureate in order to adapt it to a secondary education that became a mass education start in 1964 and get substance in the mid seventies when the Minister of National Education was Rene Haby.

His idea was a baccalaureate made up of two phases: the first phase was to take place at the end of the second year of lyceum, and the second phase - at the end of the last year. During the last year, the students were to study only four disciplines, three of them in depth. Haby wanted to encourage the higher education institutions to use for selection purposes the results from the exams in different disciplines related to the specificity of the higher studies. Even though Haby failed to materialize his ideas, some of them got substance in the eighties, in the shape of a “common base” for the first high school year, the extension of the curriculum in this first year creating later and opening for more options.

The higher education institutions were encouraged to consider the results from other types of baccalaureate, than baccalaureate “C.” Efforts have been made in order to increase the status of vocational studies and in 1977, the holders of a vocational baccalaureate were given access to the famous “Grandes Écoles”.

Another kind of pressures for the “reformation of the baccalaureate” came from the actual situation of the number of enrollments in the higher education. If in the fifties there was an average of 20,000 students for each year, in 1981 this number increased to 1 million.

Although the official status of the baccalaureate was not modified in relation with the provisions of the decree from March 07, 1808, which provided the holder of the diploma with the right to access to the higher education, the limitations of options related to the profile of higher education started to become obvious.

The pressures made upon the universities regarding the increasing number of candidates led to the fact that the universities began to show preferences depending on the options of the candidates for one or the other thematic domains of the *general baccalaureate* (A. -literature, B.-social and economic disciplines, C.-mathematics and physics, D.- mathematics and biology, E.- mathematics and technology) or *vocational baccalaureate* (A. - industrial studies, social sciences and medicine, music and dance; C.- economics and accounting; H.- computer science).

It is rather significant that while a baccalaureate diploma becomes less significant in itself, and the examined disciplines and the achieved results become more frequently considered in the admission to the higher education, the Evaluation and Prospective Direction from the Ministry of National Education, in collaboration with the General Inspectorate, organizes, in a more coherent and supported manner, complex analyses

of the candidates' performances in different examined disciplines, as well as of the behavior of the tests and the problems related to quotation, formulated conclusions related to the quality of education, as well as to the quality of examinations.

Germany

Germany uses a *different concept* of national exams at the end of secondary education: the responsibility for planning and administration of these exams does not belong to the national authorities associated to the ministry of education (as in Japan or France), neither to examination boards with independence and professional responsibility, but are supervised by national council (as in England and Wales).

The exams are planned and administered *locally* by the examination committee from the secondary education institutions, in accordance with the criteria established by the ministries for education of the Lands.

The certificate issued at the end of secondary education ("Hochschulreife") is currently known as "Abitur." The possession of such a certificate is a necessary and sufficient requirement for the admission to the higher education.

In this exam, besides German, mathematics has a privileged role, once played by Greek or Latin in the prestigious schools of the last century.

The "general" or "specialized Abitur" can be obtained at the end of the Gymnasium (the 13th year of school) which represents the secondary "academic" policy.

A specialized "Abitur" allows the access to less popular domains of higher education, such as agriculture, engineering, technology or informatics. It can be transformed into general one through an additional exam in a second foreign language.

The consistent descending tendency in the number of enrollments in Gymnasium (850,000 in 1965 and 2 million at the beginning of the eighties) and the increasing number of Abitur holders has determined evolutions in the attitudes of universities regarding the holders of such certificates; some very popular specializations, such as medicine or dentistry have introduced *numerus clausus*; others require from the candidates higher results at the exams or at certain disciplines; other departments have began to require from the candidates to include in the admission papers the results obtained in the secondary education or during the whole schooling.

Poland

A major instrument of the national policy for development and adjustment of curriculum is the national evaluation and monitoring system. The necessity to improve the evaluation and monitoring is recognized by the Polish educational system and major steps have been already made concerning the implementation of new policies of evaluation MONE. The international cooperation was largely used and is planned to be used in this field in the future. If the unity (element) of strategic policy was developed within the ministry, then it has to be responsible for the quality of some specialists in evaluation and implementation of the policy. The three elements of the policy, strategy, assurance of quality and a policy of implementation must be compatible and complementary. The role of quality of the strategic element together with the responsibility of the system assures a significant contribution to the development of a new evaluation policy and to the development of instruments required for such a policy.

It is necessary to have a good circulation of information in order to achieve correct opinions concerning the quality of the system. The necessity of the following services is rather important:

- Systematic reports about the total efficiency of the educational system;

- Systematic nationwide monitoring of the achievements in education among the chosen samples through the examination of samples from schools;
- Development of evaluation competency and instruments of evaluation and the training of evaluation experts;
- Development of new methods of quality evaluation in private schools;
- Accomplishments of investigations and reports concerning the problems relevant to education.

There are discussions about the creation of national center for evaluation, which would develop tests and evaluation instruments based on modern evaluation principles. The center would be extremely useful for the ministry and the agencies from within the system. The expertise of specialists and public servants is needed for the development of such tests in order to approach the evaluation goals. The evaluation center should have a tight connection with the strategic policy of the ministry. If there is no possibility to create such a center, for MONE it is necessary to establish coordination links with qualified personnel from Polish institutions trained to perform this job and to activate as a sponsor agency for promotion of their work in the future. The National Evaluation Center would be a resource for the development of evaluation instruments and for the processing of different researches. Those five regional councils, which represent in their totality the *kuratoria*, will assist the National Evaluation Center through personal expertise and resources, with the goal to promote estimation and evaluation services in the regions administered by the general national policy. The creation of a good system of evaluation and estimation of knowledge is not easy to accomplish in such a short period. The evaluation process is better shaped as an integral part of the initiative of curricular reform. While many things can be undertaken from the evaluation procedures and instruments from international practice, it is however necessary to uncover and to shape the parameters of Polish tradition. The progress should be accelerated. The short-term as well as long-term investments in the evaluation activity will generate benefits in form of improvement of educational standards and other social benefits. An improvement of the curriculum and evaluation represents a vital necessity for the future. Presently, a child can go through the educational system without going through certain public exams until he or she gets to the graduation exam, the so-called *Matura*, at the age of eighteen or nineteen. *Matura* is the only form of national evaluation in the Polish educational system. It dates back to the end of the eighteenth century and has many national specific features. *Matura* includes verbal and written exams in a narrow domain of disciplines and often requires an intense period for preparation of several months before the exam. It represents an examination based entirely on the knowledge acquired in school. *Matura* was however largely criticized because it stopped to serve the interests of the students or of the society. It is accused of stress, memorizing and encyclopedic studies, variability and insecurity of standards, of stress and artificiality related to this procedure, cramming tendencies and the lack of external control. The examiners often ascertained a critique regarding its inadequacy as a criterion for admission to the higher education institutions due to the incompatibility of the results among different schools. MONE has recently initiated activities in order to introduce the standard elements in this examination and to make the results more compatible among different schools. The introduction of a standardized *Matura* will be an important step for the national system of evaluation. The examined features include the introduction of standardized reference tests of school aptitude, measurements with reference criteria and exams that allow the use of

manuals. While the elements of exterior examination will be introduced in *Matura*, it is desirable to maintain the school framework. The examinations should contain a wider domain of evaluation methods and should be examined based on students' anonymity. The reform of *Matura* is a complex process, which requires the assistance and confidentiality of schools, the interest of institutions of higher education, parents and job providers. The examiners however believe that its reform is essential for the interests of the system quality and, considering that the approach could be gradual, the intentions of the reform cannot be diminished. *Matura*, as an exam for graduation from the secondary education, plays an important role not only in the evaluation of the students, but also in the structural adjustment of the system. The secondary school graduation exam, which is not differentiated enough and which has an extremely narrow academic field, can prevent the future expansion of the entire secondary education. The reform of the *Matura* should be supplemented by other forms of evaluation emphasizing younger age groups within the system, including the primary school level. There is a need for a series of sophisticated evaluation instruments in order to monitor the progress of students within the system and provide a general comment concerning the global level of performance. The new curriculum policy will include specifications of knowledge and aptitudes needed at the advanced levels of the system. It is necessary to use the evaluation instruments in order to establish whether the performance standards are achieved. The availability of a multitude of tests and standardized measures, which would supplement other forms of evaluation, is important for at least two reasons. The first refers to the measurement of individual progress of the student that is to be communicated to the student and parents, but also for diagnostic purposes of learning difficulties; and timely intervention of correction resulted from such a diagnosis can be of great use for the student. The second reason refers to the indexes obtained by the state with regard to the general standards achieved at the national level. Such data would highlight the problems of implementation of national curricula policy and would focus the attention on the regions that require additional actions for the improvement of standards. The examiners would not want to see the school system overloaded with tests and will permanently plead for the use of a large number of evaluation instruments. The way of evaluation of students tends to have reversible effects on the teaching system. According to this, the quality of teaching will be in direct connection with the quality of student evaluation. The examiners are confident that a more structured form of evaluation will be beneficial for the Polish educational system and is in direct connection with the possibility of improvement of quality and efficiency of this system. If the efforts to achieve more detailed forms of evaluation are rationally connected with good communication, synchronization and training facilities, they can be considered as essential public and professorial assistance for such measures, as part of evaluation culture. Poland participated in some international studies patronized by the International Association for Achievement in Education and by the International Evaluation of the Progress in Education. This made possible the establishment of standards and proved Poland's good results, particularly in mathematics. These are complex researches and require attention in the interpretation of the results. The OECD indicators are useful in national discussions, as well as in the promotion of security that the resources spent for education bring results compared to international trends or help attract investments directly connected with the educational policy.

Lithuania

In primary school, the promotion to a superior grade depends on the professor who chooses the formal or informal evaluation methods. Starting with the fifth grade the professor traditionally marks the students' results on a daily basis. The ten-point scale is used for grading starting with a minimal passing grade of four up to ten. In practice, only 8 evaluation grades are used for exams: fail and 4.5-10. At the end of academic year, the term grades are combined in the final grade. This is the main source of information concerning the student successes and is used for promotional purposes.

At the end of the tenth grade, all students are required to take the exams in two disciplines: mathematics and Lithuanian (as native or official language). In the schools where the language of education is other than Lithuanian, the students are required to take an additional exam in their native language. Passing of these exams is not compulsory for the graduation from gymnasium. It depends on the students grades in all disciplines. The results of national exams are included in the gymnasium certificate of the student. Thus, the exams serve as an external element of monitoring of schools and compliance with the standards.

Unlike the gymnasium system, the exams from secondary education "Matura" are compulsory for promotion. The students take five exams, Lithuanian being compulsory.

The students are required to take four optional disciplines but at least two should be from mathematics, foreign language (English, French, German and/or Russian), science (biology, chemistry and/or physics), history and other non-Lithuanian native language (Byelorussian, Polish or Russian for the schools of national minorities). In addition, other disciplines are planned to be included: art, music, geography and computer science.

After these final exams, the students get a diploma (certificate of baccalaureate) and can apply to colleges and universities. It is known that the reform of evaluation system can be used in order to consolidate the curriculum modifications and to promote new and better ways of implementation of professorial programs. As a result, many programs of reform involve modifications of curricula, as well as evaluation. In Lithuania, the HERIL program has the purpose to assure that the new exams reflect the changes in concept and philosophy introduced in curriculum and teaching materials since 1990.

United States of America

In the above used acceptation, in the United States there are no national exams. Despite the use of tests that condition the issuing of certificate of graduation from the secondary school education, in some states, such as New York or California, the general rule is that such a certificate is issued depending on a certain number of courses.

On the other side, most of the universities require from candidates the results obtained in "external tests."

The thing that lacks in terms of a national system of examination is found in the practice of most of the universities, namely to require from candidates, besides the documents that confirm the graduation from the secondary education, the results from a "Scholastic Aptitude Test" (SAT), and in the practice of many educational institutions - the use of standardized tests of "educational success".

In this country the market of educational tests is dominated by two major private organizations:

- *Educational Testing Service*, which produces the SAT (“Scholastic Aptitude Test”), *Advanced Placement Test* and standard tests of academic success;
- *American College Testing Program*, which is specialized in the production of *American College Test (ACT)*.

Most of the universities require from the candidates the results from SAT or ACT. Both tests represent sooner tests of “capacity” than tests of “academic success,” being specified starting from the intellectual abilities required for the attendance of a higher education institution, more than from the elements of a covered curriculum.

The external tests, as the mentioned ones, are planned using “objective” testing techniques, a fact that allows the use of informational technologies for the evaluation of tests and interpretation of the results.

Some critiques, formulated regarding the retroactive effects of these external tests, led to the appearance of a recent tendency to modify the concept of tests. Thus, the external tests are to be specified starting also from the curriculum elements on one side, and on the other side are to be planned also with the use of some “subjective” testing techniques. Viewed from the international perspective, the last decades witness a tendency of concentration of evaluation actions of educational achievement (*rendement scolaire*) in different countries [4].

Thus, in 1961/1962 the IEA (L’association Internationale pour L’évaluation du Rendement Scolaire/International Association for the Evaluation of Educational Achievement) was created. It is a nongovernmental international association with scientific purposes, which includes research institutes from numerous countries.

The Association accomplishes worldwide researches related to common educational problems in order to improve the educational systems, proposes programs of investigations accomplished through the participation of national centers, creates an international bank of items for the development of evaluation tests for diverse disciplines.

In tight connection with the practical actions regarding the evaluation of school efficiency, the co-participants in their accomplishment have developed numerous studies regarding diverse methodological aspects of the evaluation of school efficiency, particularly accomplished at the international level.

The studies and inquiries accomplished by IEA offers an image with a wider horizon, at the international level, about the evaluation of school efficiency, showing a large importance through the orientation and influence on the actions of this kind at the national level.

The comparisons highlight the differences remarked between the educational systems from diverse countries, allowing a better evaluation of the situation of education from each country.

The types of examinations in some countries from European Union below can be found in the following table [5].

	Primary education	End of compulsory education	End of lyceum (high school)	Admission to higher education
Belgium	Optional diploma, exams organized by schools from each Canton	Diplomas (general, technical and vocational education), exams organized by schools	Diplomas for general, technical and vocational education. Exams organized by schools.	Certain departments (engineering) require additional tests

	Primary education	End of compulsory education	End of lyceum (high school)	Admission to higher education
Denmark	None	Graduation Exam organized by the ministry of the education and checked by internal and external professors	“Atrum” organized by the ministry of education and checked by the school and external professors; vocational/technical exams	
France	None	Exams for college certificate organized by 23 academies for the basic disciplines and current evaluation for other disciplines	Baccalaureate organized and checked by 23 academies in three fields: general technical and vocational education	Admission contest organized by the ministry of education for the “grande ecole”, for other universities the baccalaureate is sufficient
Germany	None	Exams, depending on the type of school, organized by the ministry of education from 11 Lands and checked by the school professors	“Abitur” organized by the ministry of education of the eleven Lands and checked by the school professors; school grades are also taken into consideration	Certain departments (engineering) require additional tests
Greece	None	Diploma exam organized by the school	Diploma exam organized by the school	Exam organized by the ministry of education
Ireland	None	Two exams (which became one starting with 1992) organized by the ministry of education; current evaluation for some disciplines	Graduation Exam organized by the ministry of education	
Italy	Qualification exam managed by the ministry of education and organized and checked by the schools	Graduation exam and exam for technical qualification organized by the ministry of education and checked in schools	Exam for general education and technical education diploma organized by the ministry of education and checked by the local commissions	Some universities organize additional exams of this happens seldom
Luxembourg	None	Graduation exam	Diploma exam organized by the ministry of education and corrected by the school and external examiners	
Netherlands	None	Graduation exam based on current/ internal and external (written) examination	Graduation exam based on current/ internal and external (written) examination	
Portugal	None	Graduation exam based on current/internal evaluation	Graduation exam based on current/internal evaluation	Admission exam organized by the ministry of education
Spain	None	Graduation exam based on current/internal evaluation	Graduation exam based on current/internal evaluation	After the first year of admission organized by the ministry of education
Great Britain	None	Graduation exam (GCSE) organized by five regional boards; includes current evaluation	Graduation exam organized by eight examination boards	

BIBLIOGRAPHY

1. Ioan Jinga, Elena Istrate, *Manual de pedagogie*, All Educational, 1998
2. Sorin Cristea, *Dictionar de termeni pedagogici*, Editura Did&Ped., R.A. Bucuresti, 1998
3. Petru Lisievici, *Calitatea invatamantului, cadru conceptual. Evaluare si dezvoltare*. Did&PEd., R.A. Bucuresti 1997
4. Ion T. Radu, *Evaluarea in procesul didactic*, Didactica & Pedagogica, Bucuresti 2000
5. A. Stoica, *Reforma evaluarii in invatamant*, Editura Sigma, 2000
6. Ioan Bontas, *Pedagogie*, Bucuresti ALL Educational, 1996
7. *Образование для всех?* Проект МОНЕ, Центральная и Восточная Европа/СНГ/Балтия, Региональный мониторинговый доклад п5, 1998

CASE STUDY- THE REPUBLIC OF MOLDOVA

If the outburst in evaluation in the West European countries occurred in the seventies, in our country the issue of creation of a new national system of evaluation occurred in 1998, with the launch of the project of reform of general secondary education supported by the World Bank. We will describe the situation of evaluation system at the beginning of the project; we will ascertain what has been accomplished in the last two years in this chapter and what would be the steps in the creation of a new national system of evaluation.

The present examination and evaluation system has more flaws which are to be eliminated if the country intends to develop a credible and objective system of evaluation and examination, capable not only to measure adequately the achievements of the students, but also provide the ministry and the public with a general landscape about the quality of performances of educational system.

The following imperfections of the system of evaluation and examination were found *at the beginning* of the project:

1. The students are over tested but under evaluated from the perspective of formative information and acquisition of flexible abilities. The large number of exams administered in each year in middle education suggests the idea that the students are over tested. It is necessary to replace the present system of promotional and graduation exams with a simpler system which will examine the students externally only at the end of each educational cycle, i.e. at the end of the 4th, 9th, 11th and 12th grades. Simultaneously, it is necessary to change the focus of exams, as well as the classroom evaluation, from the simple reproduction of facts to the testing of abilities of critical thinking.
2. The classroom exams and tests are highly focused on the content and knowledge, being almost entirely based on the memorizing of facts. Very little attention is paid to the fields or types of tested abilities and to the fact if these correspond to the specific objectives of the curriculum. The exams largely fail to test how well the students can use the acquired knowledge in diverse unexpected situations and how well they developed abilities of critical thinking.

3. The written exams, elaborated in a centralized way, have a low technical quality. They lack validity, empirical credibility, comparability. Because the exams are evaluated by hundreds of different teachers and due to the lack of some unique criteria for evaluation (for correction and grading), these scores accumulated by the students are not comparable from one school to the other. Each year different disciplines are tested, that is why the scores accumulated at the exams are not comparable in time. The range of types of used questions is limited: in fact, questions with open answers, based on memory and occasional use of double or multiple choice questions. Combined, this means that the results achieved by the ministry and the end of each testing period do not offer an empirical view that would represent the knowledge of students at the national level, what they understand and what they can do; there is no valid comparison between the performances of students from one year with the performances from the following year.
4. The absence of clear connections with the objectives of the curriculum. Most importantly, the exams do not reflect the objectives of evaluation or standards of performance clearly linked to the objectives of the curriculum. It is essential that their objectives of evaluation be developed in tandem with the new curriculum and that these objectives are formulated sooner from the perspective of the spectrum and types of abilities subject to testing, than the memorized facts.
5. The lack of academic personnel trained in the development of evaluation instruments acceptable from the technical perspective. If Moldova is decided to develop and implement a system of evaluation capable to monitor not only what is being acquired by the students, but also how the schools and teachers work, how the planned curriculum is accomplished and how the resources are used, in order to accomplish this, it should create an institutional framework and appoint professional persons competent from the technical perspective.

Presently, the educational system from the country is facing the following major problems related to evaluation:

- Lack of a complex concept about the evaluation in education that would favor the development of a national evaluation system that could function in coordination and provide relevant and consistent data about the evaluation;
- Poorly accomplished is the social function of evaluation concerning the objective relationships- contents-methodology (teaching-learning-evaluation);
- Lack of documents with a regulating nature at the system level (performance standards, evaluation objectives, methodological guides etc.);
- Lack of a qualitative analysis of evaluation of school successes;
- Lack of a grading system capable to estimate the achievement of educational objectives;
- Insufficient training of academic staff concerning the development and implementation of some efficient instruments of evaluation;
- The present organization of exams does not provide a possibility to use the results for a general qualification, selection and estimation of the quality of education;
- Lack of a publicity regarding the method of evaluation and the evaluation results.

Let us see what happened in Europe in the field of evaluation at the end of seventies, because the evaluation system from the Republic of Moldova will go through the same phases [4]. It started from the idea that the objective of evaluation is not

students, professors, lessons or educational institutions in particular, but the product of educational system as a whole, the output estimated according to the knowledge of the students. The envisioned objective is triple:

- Development, for each teaching level, of a statement of knowledge and abilities of students from the perspective of objectives defined by the programs (curriculum);
- Comparison of the results achieved at different levels in order to observe the progress (or regress);
- Comparison of school results with certain individual characteristics of students, with certain components of the environment of educational institutions and certain internal factors such as the size, heterogeneity of class, failures, orientation, conditions of school life.

Thus, we are talking about an objective which implies primarily the statement of acquired knowledge, but which also implies a comparison between this statement with other data in order to place it in a context.

The instrument of evaluation is based on a sampling of educational institutions, scientifically created in order to be representative at the national level. The samples are randomly chosen from the totality of institutions, ranked depending on size, class structure, urban or rural environment. Preliminary studies showed that the control of these important variables was guaranteed by their representation (students' age and gender, socio-professional category of parents, composition of academic body). The same rigor is imposed on the establishment of instruments. The objectives of the programs are translated first of all in noticeable behaviors (i.e. that can be evaluated) of the student. Then, for each evaluated objective more exercises are developed which allow the acknowledgement of appropriate behavior. These tests are developed by workgroups reuniting different experts (school and university professors, scientific researchers). Before their use in evaluation, they are carefully verified.

In order to have an uncontested evaluation instrument it is necessary to include all actors in the process of evaluation: the responsible institutions at the national level, study and research organizations, professional unions, parents associations.

We will mention that the evaluation represents a complex activity, which collects, processes and interprets the information regarding the potential, situation and functioning of a system, the achieved results. The acquired information allows the estimation based on pre-established criteria and the backing up of decisions that are to be adopted in order to combine the results and the functioning of the system.

In order to achieve a qualitative evaluation, it is necessary to comply with more phases, each important in particular and impossible to be neglected [2]:

- Planning phase;
- Accomplishment phase (collection of data);
- Data processing phase;
- Valorizing phase.

For the first time in the Republic of Moldova, a national evaluation based on a scientific organization was planned at the end of primary cycle, accomplished in May 2000.

The goals of evaluation were identified in the planning phase:

- Identification of the level of knowledge and abilities at the end of first education phase;
- Diagnosis of achieved results ;
- Prognosis of the future performances of the students;

- Simulation of students' motivation for learning and its results;
- Real estimation of the quality of teaching-learning-evaluation in primary education.

The evaluation was to allow the estimation of curricula reform, schoolbooks and academic framework.

The performance standards and evaluation objectives were determined according to the curricular objectives. The evaluation test was chosen as instrument of evaluation. The tests were validated in two pretests: small sample and representative sample, which allowed the stimulation of national test at the end of the year.

The data processing phase determined the degree of achievement of objectives, compared the results of each county with the national results and developed an analytical report of the test.

The valorizing phase, which implies the emission of judgments of value, the synthesis and the report of evaluation results, formulation of conclusions and decision making, accomplished the following: the reports about the testing results was presented to the Council of the Ministry of Education; the testing results were discussed within a republican seminar with the participation of responsible persons from the primary education from the counties and within the methodical meetings; an analytical report was presented to the Institute for Educational Sciences, interested persons from the ministry. This methodology of organization of national tests/exams is to be used in the next years, being continuously improved.

The main information provided by the Direction of Evaluation after the national testing in the fourth grade is the degree of achievement of performance standards and evaluation objectives for the entire population involved in schools and in comparison with counties.

Some data obtained in Romanian language and mathematics is presented below.

General statistical data achieved at the national test in **Romanian language**:

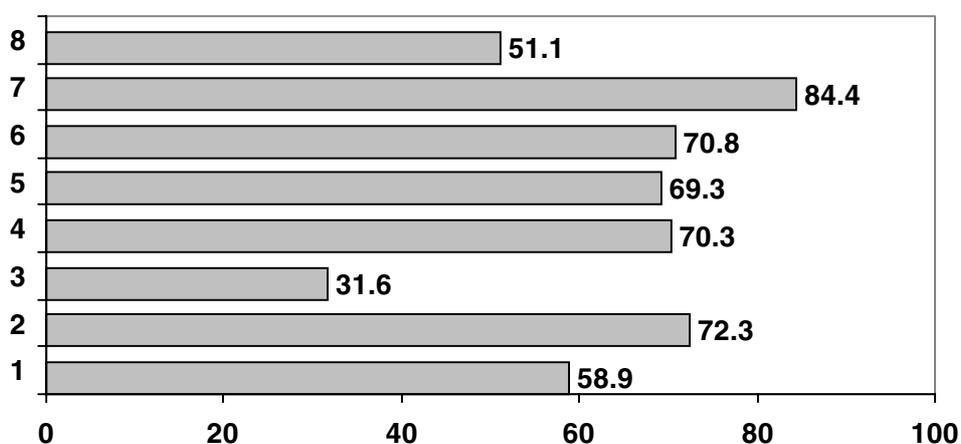
1. The minimum score for the test- 0 points;
2. The minimum achieved score for the test- 0 points;
3. Maximum score for the test - 30 points;
4. Maximum achieved score for the test- 30 points;
5. Average score – 21 points;
6. Median score (score achieved by the middle candidate)-23 points;
7. Modulus (score achieved by most of the students)- 27 points;
8. Standard deviation – 6.3
9. Percentage of accomplishment – 65.1%
10. 1994 students (4.06%) fully accomplished the tasks, accumulating 30 points (100% of the test)
11. 129 students (0.26% of the tested students) had the minimal score

(b) Degree of accomplishment of performance standards

Performance standards	Objectives	Achievement percentage
1. Reading Comprehension	1, 2, 3	58.9
2. Formulation of main ideas of the read text	4	72.3
3. Identification of narrative, descriptive sequences in the narrated text	5	31.6

Performance standards	Objectives	Achievement percentage
4. Composition of statements and short texts with indicated parameters	6,7	70.3
5. Capitalization of artistic means of changing the meaning of the word	8	69.3
6. Establishment of relationships between words (synonyms, antonyms, homonyms)	9, 10	70.8
7. The use of vocabulary adequate to the theme	11	84.4
8. The use of orthographic norms and punctuation	12, 13	64.2 46.0

**Romanian language. Degree of achievement of standards.
4th grade, May 2000**



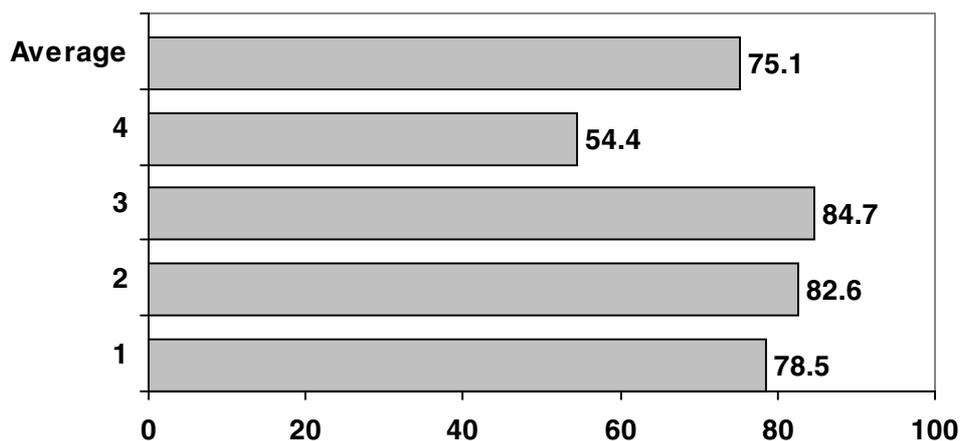
Mathematics. Grade 4-a, May 2000

1. The minimum score for the test- 0 points;
2. The minimum achieved score for the test- 0 points;
3. Maximum score for the test - 37 points;
4. Maximum achieved score for the test- 37 points;
5. Average score – 28 points (75.7%);
6. 5435 students (8.7%) got the highest score, accumulating 37 points
7. 41 students (0.07%) had the minimal score
8. Score 1-14 points – (1.29%)
9. Median score - 30 points (81%);
10. Score 3-28 points – 75.7%;
11. Standard deviation – 7.7
12. Standard error – 1.25.

	Objectives	Degree of achievement
1.	Understanding the notion of number and operation with numbers	78.5%
2.	Recognition of geometrical figures, measurements	82.6%

	Objectives	Degree of achievement
3.	Accomplishment of estimations and approximations	84.65%
4.	Solution of situations-problems, organizing data	54.38%
Total		75%

Degree of accomplishment of tasks according to the objectives



Standards	Name of standard	Degree of achievement, %
S.1	Writing natural numbers smaller than 1.000.000	69.7
S.2	The use of the 4 operations with natural numbers, addition and subtraction of fractions with same denominator	56.34
S.3	The use of fractions with same denominator in simple exercises of addition and subtraction	86.1
S.4	Building series according to the given rules	95.4
S.5	Recognition of geometrical figures and graphic representation of plane geometrical figures	96.1
S.6	Characterization of plane geometrical figures using the adequate terminology	82.4
S.7	The use of estimations and approximations in verification of certain calculations	88.5
S.8	Estimation of different measures of objects in relation with the given measuring unit	80.8
S.9	Formulation and solution of problems involving not more than three operations	49.9
S.10	Organization, classification and interpretation of data	58.9

It is worth mentioning that there are no decisions that would imply the launch of a real plan of actions that would improve the results of education and the functioning of the system. In this sense, the decision should be taken by the Ministry of Education, the

Institute of Educational Sciences, the National Council for Curriculum and Evaluation, governmental and local authorities and parents.

The role of evaluation data in planning the educational policy was discussed at the International Seminar “Analysis of national exams - conclusions and perspectives”[3], which stated that an increasing number of countries consider that the evaluation of results of education is a central part of the educational systems and that it is based on three principal reasons:

- Increase of educational standards;
- Rationalization of allocated resources;
- Increase of responsibility.

Increase of standards:

- The professors continuously improve the teaching methods in order to improve the results;
- The students and parents invest more energy, more time and more money in order to be more successful in education;
- It is possible to plan measures of remedy according to the evaluation results.

The allocation of resources:

- Governmental and local authorities can orient resources, for example, towards the identification of the most important areas with more chances of success;
- The government can grant awards;
- The government can impose sanctions.

Increase the responsibility:

- The results can be made public;
- The local authorities and schools can be held responsible for the obtained results;
- The parents can use the evaluation results to choose between different competing schools;
- The professors can be rewarded/penalized depending on the results.

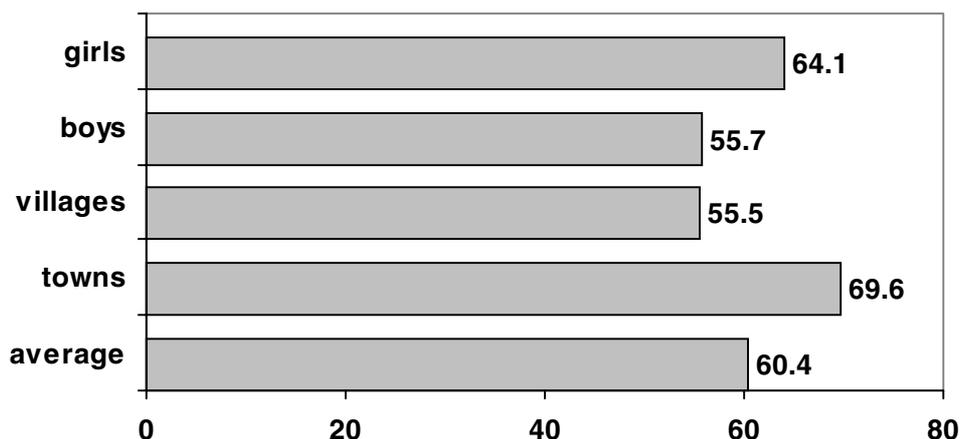
The data concerning the achievement of educational standards can be obtained from different activities:

- International studies -TIMMS, PISA;
- National evaluations at the end of educational cycles;
- National evaluations in representative samples;
- Results of some exams- graduation from the gymnasium cycle, baccalaureate.

Within an evaluation of a representative sample for the fourth grade, organized between January 30- February 1 2001, was created the data processing for the whole population involved in schools and for different sampling levels: students from villages and towns, boys and girls. The degree of achievement of the tests is shown below:

Degree of achievement of tests	
Average for the whole population involved in schools	60.4
Towns	69.6
Villages	55.5
Boys	55.7
Girls	64.1

Percentage of achievement of test



The subsequent national tests will allow the accumulation of new data and a dynamic comparison of the results. This implies that the testing results be objective and credible, the fact yet hard to accomplish in present conditions because in external evaluations/examinations take part the educational staff from the respective educational institutions that deal with training of the students. A mean for increasing the objectivity and credibility of evaluation results would be the creation of certain county commissions for checking, which would assure primarily the universal checking and grading standards. This thing was done in the test from the year 2000 in the 4th grade, but was given up in the test planned for 2001 and within the exams of graduation from the gymnasium cycle.

The evaluations (tests) at the national level have several defining grades [6]:

- The evaluation is initiated, planned, organized and accomplished by the ministry or other responsible institution;
- The evaluation includes all educational institutions and all students that represent its “target population”;
- The content of tests and the way of administration (estimation, correction and processing of the results) are the same for all institutions involved in evaluation;
- The results of evaluation do not influence directly and formally the academic situation of the students;
- The targeted objectives are correlated with different components of the educational activity: the level of training of the students in different disciplines and at a given time, the quality of the curriculum, the quality of some schoolbooks etc.;
- Among these features, the evaluation at the national level is external, which does not exclude its accomplishment with the support of the professors that trained the students.

In our case, the term “national testing” is used in a confusing way. It was started from the fact that at the end of the fourth grade there are no planned exams (graduation from the primary cycle or promotion in the fifth grade). According to the regulations, the national testing *directly and formally influences the academic situation of the students*. The annual grade is calculated as an arithmetic average of three grades: the average a first and second terms and the grade received at the national test. Thus, if we are to use the accepted terms, in the fourth grade a national exam is being

organized, fact that should be proclaimed, otherwise the status of tests should be modified.

The evaluation accomplished in all student groups requires the involvement of large human, financial, material resources, time, etc. This is why, for the same purposes with effects similar to the ones produced by the evaluations at the national level, the evaluations are accomplished based on samples [6]. For this purpose, a representative sample for the school system is formed and the evaluation is accomplished only in the units included in the sample. Considering the fact that the evaluations are not accomplished in all educational units but only in those included in the sample, this evaluation includes all features of evaluation at the national level. The Ministry of Education and Science will have to plan such tests for representative samples in connection with the implementation of the new curriculum, in order to study the dynamics of student performances, i.e. not only at the end of school cycles but also for the other grades. As worth-studying examples could serve the tests for representative samples organized in the fourth grade in January-February and in the ninth grade in February, 2001, involving approximately 5,000 students each (7.5 percent).

The component "evaluation of knowledge" has the purpose to transform the evaluation and examination system from the country into a national evaluation and estimation system capable to monitor and provide information regarding the quality of educational system.

The component will support the development of an improved evaluation and examination system in the following key domains:

- The integration of the objectives of evaluation with the new curriculum;
- Improvement of the key national exams in the fourth and ninth grades in order to monitor the student performance and the impact of the new curriculum and new schoolbooks on the results of education;
- Development and distribution among the teachers of educational materials-models of evaluation for the most important disciplines for the grades 1 through 9;
- The training concerning the use of these materials;
- The accomplishment of a research based on sample of the student achievements within the present system in order to compare it with the students performance within the new curriculum at the end of the project;
- Will make sure that the new standards of evaluation of knowledge for each discipline and level correspond with the standards of national curriculum and that there is a coherence between the materials and formats of evaluation for each discipline and educational level.

The number of exams has been reduced in the last years. The national exams are to be administered to the whole age group at the end of gymnasium and high school cycles.

These exams are to perform the main three functions:

- The qualification of the candidates' knowledge and abilities;
- Provision of valid and credible information regarding the training level of the candidates, used in case of employment or selection for a higher education cycle;
- Measurement of the quality of education.

The assurance of technical quality, indispensable to these exams, will form one of the key elements of the functioning of the whole system.

The secondary and higher education institutions will be encouraged in different ways, prioritizing primarily the technical quality of national exams, to use these results as criteria for selection of the candidates.

Orientation and strategies in the field of evaluation of educational success depends on the accomplishment of the following tasks:

- Development of a structure with the function of strategic planning of evaluation; development of the concept of evaluation and the national education from the Republic of Moldova;
- Development of a system of educational standards in the pre-university education;
- Development of a credible and objective system of evaluation and examination capable not only to measure adequately the students' achievements, but also to provide the ministry and the public with a general picture about the quality of performance of educational system;
- Improvement of grading system;
- Development, experimentation and use of some new methods of evaluation with the purpose to increase the efficiency of teaching-learning process;
- Development of a credible and national examination system compatible with the exams accomplished at the international level;
- Integration in a unitary system of the current evaluation and exams;
- Creation of a database to assure that continuous monitoring of student performances;
- Creation of a database with items and of a mechanism for their use;
- Continuation and intensification of research in the field of evaluation.

One of the problems to be solved is the establishment of the relationships between formative and summary evaluation. We will explain what each of these represent [1, 7]. The strategy of formative (or continuous) evaluation provides the process as a whole with an efficient periodicity through the opportunity of regulation of the system in a frequent way and with gradual, successive steps. It accompanies the entire educational phase, and is accomplished through systematic tests of the students regarding the entire covered information. The summary (cumulative) evaluation is usually accomplished at the end of a longer period of education (for example, chapter, term, school year, educational cycle etc.). Talking about the tight connection between these two ways of evaluation, we will mention the problem "the total does not equal the sum of parts" [5]. For instance, the success in the written form is not the product of x successes in orthography + x successes in conjugation + x successes in grammar... We will also mention that, according to B.S. Bloom, the formative evaluation does not judge and does not classify the student. It only compares the performance of the student with previous successes. In this context, it is required to modify the present grading system used in our system of education, which implies grading only after a formative evaluation, the calculation of term or annual average without considering the dynamics of school progress.

One of the innovational ideas that requires a thorough discussion is the elimination of the notion of *insufficient grade*. This would reduce the percentage of the grades "adjusted" to the sufficient minimal grade in different types of evaluation.

In order to unify the criteria for the estimation of knowledge and abilities of the students and for the comparison in grading, it is necessary to create a system of criteria for grading. Such criteria could be the performance descriptors for disciplines or curricular areas.

This problem relates to the acknowledgement of the modifications required in the system of teaching - learning-evaluation with the transition to an education based on objectives [4]. The system of education must help the student to acquire not only certain cultural knowledge, but also some methods of thinking and action, some intellectual, manual, social, etc. abilities (“ to be capable of ...”) and behaviors. It is not enough for the student to prove that such knowledge has been acquired, that he or she has the ability to solve certain problems; the students should prove that they acquired the methods and behaviors considered as objectives to be achieved.

External national evaluation should be accomplished by an institution specialized in evaluation and examination, directly subordinated to the government or autonomous, but authorized to organize external evaluations. In this sense, it is necessary to create a National Center of Evaluation (NCE).

The main functions of NCE would include:

- Organization of national evaluations (tests for all students or samples) in the basic disciplines and at the key phases of the educational system;
- Development, preliminary testing, production of tests and accomplishment of standard exams in schools, the issuing of certificates and diplomas for the successful candidates;
- Development of test models and support, diagnostic, formative and summary materials in order to assist the educational personnel;
- Coordination of activity and provision of scientific and methodical support to the county directions of inspection and evaluation;
- Coordination of activity of workgroups in the development and publishing of evaluation materials.

The national center for evaluation would include the following subdivisions:

- *A production unit* which will develop, perform a preliminary test and produce the particulars tests and exams, will complete and monitor the item database;
- *A unit of technical resources* which will assure the multiplication of tests and their security, publishing of evaluation materials, packaging, distribution of evaluation materials among the county directions for education or schools, collection of answers sheets for the optical reader, collection and insertion of data in the computer;
- *A unit for processing and statistical analysis* for the automatic processing and systematization of data regarding the evaluation results (including the efficiency of the intended, implemented and accomplished curriculum);
- *A unit for support and training* in order to offer an expert support to the workgroup members at the scientific level in order to study and implement the international practice in the field of evaluation, provide a methodical support to the inspectors, school principals and professors. The subdivision will have relations with the International Association of Evaluation, evaluation centers from other countries.

In conclusion, we will mention that an efficient evaluation system implies certain expenses. Previously organized exams did not imply expenses at the system level because the subjects of the tests were broadcasted through the radio and the processing of the results was accomplished at the level of educational institution. Having the experience of the last national tests and the tests among the representative samples, we could perform some estimation regarding the costs that are to be planned.

We will describe some expenses needed for the organization of an evaluation in a school discipline, for one grade, involving approximately 60,000 students:

- The activity of the workgroup in the development of evaluation materials (3 preliminary tests and 3 final tests). Four persons will be involved during one year (4 persons * 12 months and * 1,000 lei = 48,000 lei);
- Multiplication of preliminary and final tests - 60,000 tests * 1 lei = 60,000 lei;
- Expenses for transportation for the representatives of county directions of education (transportation of the tests from the National Center of Evaluation and the transportation of the results or answer sheets for optical recognition)-approximately 20,000 lei;
- Preparation and publishing of answer sheets for the optical reader-approximately 60,000 lei.

For the statistical processing, it is necessary to have an optical reader for the scores printed on a special form, which costs about \$ 30,000; specialized software for the development of answer sheets and for the processing of collected data (approximately \$5,000).

At the county level, it is necessary to plan expenses for the organization of evaluations performed by the county directions for education and the activity of county correction commissions in case of national evaluations organized by the ministry or the National Center of Evaluation.

The local public authorities will plan financial resources for purchasing of initial, formative and summary evaluation materials, organized by the educational institution; for processing within the National Center of Evaluation of data referring to a specific institution in relation with the results of national test. In the following years a partial financing of national evaluations at the end of educational cycles, will be needed (multiplication of tests).

BIBLIOGRAPHY

1. *Evaluarea curenta si examenele. Ghid pentru profesori.* Coordonator A. Stoica, Bucuresti 2001.
2. V.Cabac, *Materiale pentru conceptual evaluarii rezultatelor scolare in institutiile de invatamant preuniversitar din Republica Moldova*, Balti, 2001
3. George Bethel, *Comunicarea datelor obtinute in urma evaluarii si utilizarea acestor pentru proiectarea politicii educationale*, Materialele seminarului "Analiza examenelor nationale – concluzii si perspective", Bucuresti-Mamaia, 25-30 septembrie 2000
4. Jean Vogler (coordinator), *Evaluarea in invatamantul preuniversitar*, Iasi, Polirom, 2000
5. Genevieve Meyer, *De ce si cum evaluam.* Polirom, Iasi 2000
6. Ion T. Radu, *Evaluarea in procesul didactic*, Bucuresti 2000
7. R. Doicescu (coordinator) *Ghid de evaluare la istorie*, Bucuresti, PROgnosis, 2001