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THE PERSPECTIVES OF EDUCATIONAL DIAGNOSIS IN ROMANIA WITHIN THE EUROPEAN CONTEXT

Autorka prezentuje system edukacji w Rumunii – nieco podobny do polskiego. Przedstawia główne założenia reformy systemu rozpoczętej w 1990 r. i obejmującej wprowadzenie Podstawy Programowej w latach 1998-1999, powołanie w 1998 r. Krajowego Centrum Oceniania i Egzaminowania (NAES) odpowiedzialnego za przygotowanie i przeprowadzenie testu kompetencji (gimnazjum) i nowej matury (szkoły ponadgimnazjalne), poczynając od 2000 r.

NAES odpowiada za uczciwość, trafność, obiektywizm, transparentność, informacyjność i efektywność wprowadzonego systemu egzaminów szkolnych. NAES podejmuje również działania w zakresie: 1) przygotowania testów, badających osiągnięcia uczniów czwartych klas szkoły podstawowej (badania w latach 1995, 1998 i 2000) w celu monitorowania jakości kształcenia, 2) doskonalenia nauczycieli w metodologii oceniania wewnątrzszkolnego, 3) udziału w badaniach międzynarodowych TIMSS, PISA, PIRLS.

Według autorki wprowadzenie systemu egzaminów zewnętrznych w Rumunii i innych krajach europejskich zapewnia wyższą jakość przygotowywanych narzędzi, sposobu przeprowadzenia egzaminu, a publikowanie informacji dotyczących wyników sprzyja poprawie poziomu kształcenia.

Summary:

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1. A BRIEF PRESENTATION OF THE ROMANIAN EDUCATIONAL SYSTEM

Compulsory education constitutes a very important component of any education system, at least judging from the budget allocated by the educational authorities all over Europe. As many other education systems, the Romanian one has, as a main component, the compulsory education. Its structure can be seen graphically in the following tables and diagrams.

In Romania, compulsory education currently consists of four years of primary and four years of lower-secondary education. Starting with the schooling year 2002-2003 the preparatory schooling year becomes compulsory education (first in 12 counties out of 41, on a pilot basis), therefore primary education will comprise 5 years, and will be followed by four years in gymnasium. During the compulsory cycle, provision is common for all students, a range of

optional courses at school decision being available. The new **national curriculum** is in place since 1998. For each subject, at least three **alternative textbooks** are available for students up to grade 8. All these have direct implications on the way the national examinations and the various types of assessment are currently functioning within our educational system.

Romania is considered a medium-size country in Europe. As a result of the educational reform, the Romanian educational system combines some centrally controlled components with some other, decentralised ones. **The National Curriculum** and **the national examinations** are centrally controlled, responsibility for the administration at school level and the implementation of learning programmes within them resting with regional authorities (*județe*). The system is better depicted by the diagrams in the following pages. From the assessment point of view, some key issues are: the teacher/student ratios (this was about 1/36, but it was reduced to 1/25 in the past years); a second important issue is the mere number of candidates for the two national examinations. Strictly descriptive data are summarised in the table below:

| <i>National examinations</i> | <i>No. of enrolled students</i> | <i>No. of promoted candidates</i> | <i>Success rates</i> |
|------------------------------|---------------------------------|-----------------------------------|----------------------|
| CAP 2001 | 286 072 | 249 600 | 87,25% |
| BAC 2001 | 158 982 | 154 579 | 97,23% |
| CAP 2002 | 278 946 | 214 751 | 78,57% |
| BAC 2002 | 146 676 | 123 987 | 86,71% |

Table 1: Scale of national examinations in Romania. Source: NAES database for the years 2001-2002

The relatively large number of candidates involved in the national examinations in Romania (about 500 000 yearly) raises various challenges concerning the administration and logistics of the examinations, with direct consequences on maintaining and increasing the quality of the whole evaluation process and, implicitly, on the quality of the educational diagnosis produced.

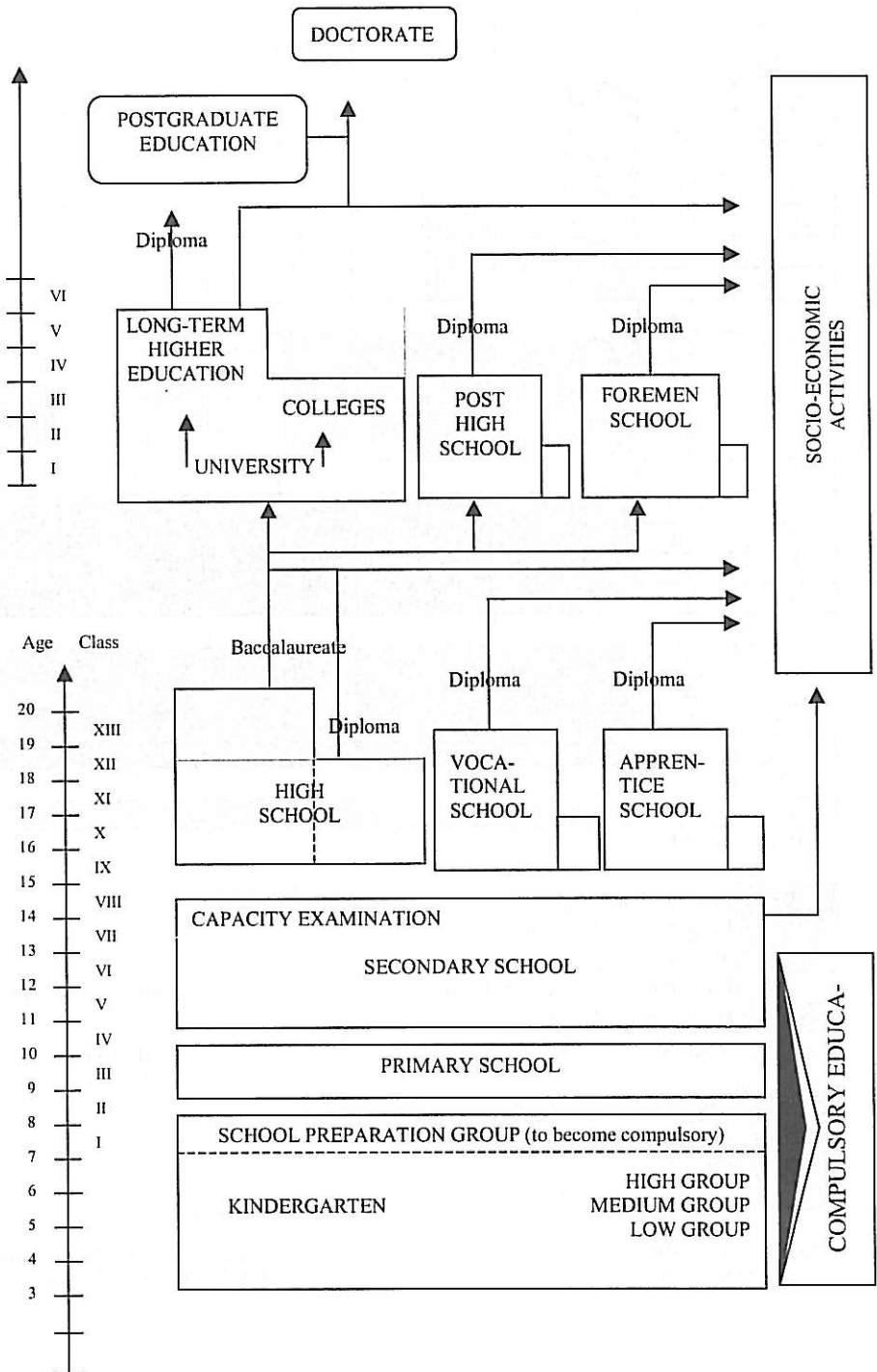


Diagram 1: Flowchart describing the Romanian Educational System. Source: I.E.S.

National Education System in Romania

| | | | | | | | | | | | | |
|-------|-------|---|---|---|---|---|---|---|---|---|---|---|
| 27/28 | | | | | | | | | | | | |
| 26/27 | | | | | | | | | | | | |
| 25/26 | | | | | | | | | | | | |
| 24/25 | | | ⇒ | | | | | | | | | |
| 23/24 | VI | | ⇒ | | | | | | | | | |
| 22/23 | V | | ⇒ | | | | | | | | | |
| 21/22 | IV | | ⇒ | | | | | | | | | |
| 20/21 | III | | | | ⇒ | | ⇒ | | | | | |
| 19/20 | II | | | | | | ⇒ | | | | | |
| 18/19 | I | | | | | | ⇒ | | | | | |
| | Year | ↑ | | ↑ | | ↑ | | | | | | |
| 17/18 | XII | | | | | | ⇒ | | ⇒ | | | |
| 16/17 | XI | | | | | | | | ⇒ | | ⇒ | |
| 15/16 | X | | | | | | | | ⇒ | | ⇒ | |
| 14/15 | IX | | | | | | | | ⇒ | | ⇒ | |
| | | ↑ | | | | | | ↑ | | ↑ | | |
| 13/14 | VIII | | | | | | | | | | | ⇒ |
| 12/13 | VII | | | | | | | | | | | |
| 11/12 | VI | | | | | | | | | | | |
| 10/11 | V | | | | | | | | | | | |
| | | ↑ | | | | | | | | | | |
| 9/10 | IV | | | | | | | | | | | |
| 8/9 | III | | | | | | | | | | | |
| 7/8 | II | | | | | | | | | | | |
| 6/7 | I | | | | | | | | | | | |
| 5/6 | | ↑ | | | | | | | | | | |
| 3/6 | | | | | | | | | | | | |
| | AGE | | | | | | | | | | | |
| | GRADE | | | | | | | | | | | |

| | | |
|--|------------------------------------|---|
| | Post graduate training | ↑ Entrance/exit point ⇒ Exit from education system |
| | Long-term higher education | |
| | Short-term higher education | |
| | Post-upper secondary education | |
| | High school (Lyceum) | |
| | Vocational school | |
| | Apprenticeship school | |
| | Lower secondary school (Gymnasium) | |
| | Primary school | |
| | Pre-school education | |

Diagram 2: Legend of the Romanian National Educational System. Source: Institute for Educational Sciences.
 Note: Starting with the school year 2002-2003 the preparatory grade before first grade becomes compulsory

2. THE ASSESSMENT AND EXAMINATION REFORM IN ROMANIA

As all over Central and Eastern Europe, in Romania as well the past decade was “a second age of Reform”. The comprehensive educational reform in Romania comprised at least four main stages¹:

1. **“The Deconstruction Stage (1990).** This initiated the removal of all traces of communist ideology from the textbooks and all other school documents. This measure was coupled with the decrease of compulsory education from 12 to 8 years of schooling, the diversification of options and choices in secondary education and high schools, the opening of private sector institutions at all levels (kindergartens, colleges, universities, polytechnics etc.).
2. **The Stabilisation Stage (1991-1992).** This may be considered as a necessary moment of reflection and stability, in order to let the changes and “corrections” infuse and penetrate thoroughly all levels of educational system.
3. **The Restructuring Stage (1993-1996).** According to many analyses, this may be considered to be the true start of deep educational reform in Romania. It includes the adoption of the law of education (1995), of the law on University accreditation (1993), and of the Statute of the teaching staff (1997). The major significance, from the Romanian perspective, is that the new educational policy became demonstrably more harmonious in this stage – goals were pursued more consistently, proposed changes were to be implemented at all levels without major delays; reliable partners were attracted for co-financing the education reform; the increase and diversification of higher education options officially recognised by the Ministry of Education; new school regulations were implemented in accordance with the labour market development and other movements in the Romanian society.
4. **The Comprehensive or Accelerated Reform Stage (1997 to date).** The structural changes of the educational system are now aimed at six main fields:
 - curriculum reform (educational plans and programmes of studies, syllabi, textbooks embedding European values like European standards on human rights and citizenship, education for all, lifelong learning etc.);
 - the moving from reproductive learning to problem-solving, coupled with the re-launching of university scientific research;
 - powerful networking of primary schools, gymnasia, high schools, colleges, universities and their local communities;
 - significant investments in infrastructure and communication technologies;
 - reform of school and academic management according to principles like decentralisation of decision-making, institutional autonomy, partnership with local community;
 - diversified options and stimulation for international cooperation.”

It is a common truth that in the transition periods, both the changes, and innovations implemented are, in fact, co-existing together with some old practices or traditions. In the assessment and evaluation field, the most visible changes targeted first and foremost the high stakes examinations. Today the efforts for reform and modernization face blockages and chronic under-financing of the Romanian education. Notwithstanding these constraints, significant steps continue to be made in assessment, as in all other social domains in Romania.

The assessment reform in Romania is naturally embedded in the **curriculum reform**. Starting with 1998-1999, the new **National Curriculum** was implemented with both its com-

¹ See the references: Stoica, A.; Mihail, R.; Bethell, G. (2001), pp. 15-16.

ponents: the core curriculum and the extended curriculum, comprising the extended number of teaching / learning hours, and the optional subjects.

The key point is here **the interface** between curriculum and assessment and the way this interface works in the "educational reality" of the classroom. For each subject in the National Curriculum, the **learning syllabus** approved and published comprises:

1. *the attainment targets;*
2. *the recommended learning activities;*
3. *the list of contents (operating as a framework of reference for the textbook authors);*
4. *the recommended teacher activities / suggestions concerning school-based curriculum development;*
5. *the curriculum performance standards.*

The learning syllabus constitutes the basis for constructing the **examination syllabi**, the central document around which the NAES is building the national examinations. Since 1999, NAES is making public, at the beginning of each academic year, the examination syllabus per each exam subject.

Achieving quality in education requires us to set high standards in all aspects of the teaching/learning process, to make them transparent, and to maintain them over time. The role of assessment is recognised as to certify in a reliable and convincing way that the achievement of individual student is done according to the agreed standard, and the performance of the education system as a whole is equally reliably estimated.

The Educational Reform Project, funded by the Government of Romania with the support of the International Bank for Reconstruction and Development took place between January 1996 and September 2001 and supported the Government's strategy for improving the quality of basic and secondary education. The twin goals of the Project have been:

- To update the curriculum, strengthen teacher training, improve examinations and assessment practices, and to raise the quality of textbooks; and,
- To increase efficiency in the management of public resources for education.

The objectives of the examinations and assessment sub-component have been:

- To support and 'drive' planned changes in the structure and content of school education;
- To review and modernise the existing national examinations (lycée and baccalaureate) and to build the technical expertise and institutional capacity needed to meet such new requirements as may be set by law or Ministry policy; and,
- To improve the technical quality of assessment and examinations, so that they meet three basic purposes: certification; selection; and providing information about the quality of education to the public.

The key outputs at the end of the project (September 2001) have been:

- Establishment of the National Assessment and Examinations Service (NAES) as the organisation responsible for the conduct of national examinations and assessments;
- Appointment of professional staff to NAES;
- Provision of suitable accommodation and adequate equipment for NAES;
- Training of NAES Officers and members of its subject working groups in principles and practice of assessment, item writing techniques, assessment methods and strategies;
- Introduction of a new 'Capacitate' examination in accordance with the Education Law;
- Preparation and introduction of new models for the Baccalaureate examinations from 2000 onwards.

The National Assessment and Examinations Service (NAES) was established by the Romanian Government in 1998, as a **national center**, with the specific task of setting up and monitoring the new assessment and examination system. The needs that NAES responds to are as follows:

- Reforming the assessment and examination system;
- Shifting the examination emphasis from **inputs** (entrance/exams selection) to **outputs** (school-leaving / certification exams);
- Creating and implementing professional procedures for diagnosing students' achievements;
- Providing training in learning assessment to teachers and examiners;
- Ensuring a transparent communication with the policy makers and the interested public.

The NAES medium and long term "mission statement" is built around the four major objectives:

- To support changes in the structure and content of curriculum and school education;
- To modernise school-based assessment;
- To build expertise and capacity within the system, at various levels and in various roles; and;
- To continuously improve assessment and examinations, so that they meet the three basic purposes: certification, selection, and providing information about the quality of education.

The functions of certification and selection are best served by the national examinations. Starting with 1998, in Romania the term refers to the formal testing of students' achievement conceived and administered by NAES, therefore external to the student's own school. But NAES is responsible for conducting both examinations, and national assessments. The responsibility for the implementation of OECD - PISA+ project (Programme for International Student Assessment) in Romania belongs to NAES as well. It is important to highlight the fact that all forms of assessment are seen as being entirely **complementary and consubstantially** in terms of the diagnosis produced, therefore the improvement in the quality must be comparable in all fields.

Analysing the global situation of the educational reform in Romania, it is very easy to notice the very paradox: we are a society still undergoing a deep-reaching crisis, embarked in Reform in a crisis situation. In order to succeed (*i.e.*, qualifications recognised on the national and European market), the Reform which must be comprehensive, coherent and effective on short, medium and long term, under severe budgetary constraints. At this point, when the first generation of internationally co-funded projects is coming to its end, some other examples of successful policies are searched.

In Romania, for example in higher education (H.E.), **quality assurance policies** have already been implemented successfully at pilot level, via various projects. Entropic policies ("*... system policies, reflecting state's control of the H.E. system's development, in accordance with its educational policy. The control is realised through the accreditation and certification system.*"²) are the means through which the state of the system is to be modified, following the quality requirements agreed.

As a consequence, the next step for the Romanian pre-university education policy seems to be the extension of these policies of quality assurance at the institutional level in

² See the references: Miroiu; Bratianu, (2000), p. 13

compulsory education, as a powerful means of diminishing the disparities in relation with both university education, and the Western European education. These policies have as major and urgent directions, established by the strategy of educational development for the years 2001-2004, the following:

1. *Establishing / defining the educational standards for all educational levels*
2. *Defining the recognition (internal and external) procedures and mechanisms*
3. *Developing the certification systems (internal and external)*
4. *Building-in the Quality Assurance mechanisms and make them transparent*

While in the field of higher education these mechanisms were already set in place with good chances of sustainability, in the pre-university education this work is "still in progress".

3. NATIONAL EXAMINATIONS: A SUCCESS STORY, THE PRESENT AND THE FUTURE

Examinations are **essential** for students, their parents, as well as for everyone who uses, or is judged by, the results. The work of the National Assessment and Examinations Service responsible for the two public examinations is, therefore, placed under close and constant scrutiny. As an institution, NAES adheres to a set of *professional* principles:

- **Fair** "The system should be fair³ to all candidates regardless of their gender, ethnic origin, faith, or any other characteristic not directly related to the subject being examined. In addition, examinations and the results they produce should be comparable across regions and among schools.
- **Appropriate** The syllabuses; question papers and marking schemes should be appropriate (*valid*). They should reflect both the letter and the spirit of the curriculum. They should reflect the nature and tradition of education in Romania.
- **Reliable** The results should be accurate and reliable so that those making decisions about selection and/or employment can use them with confidence.
- **Transparent** The examining process should, as far as possible, be open to all interested parties including students, parents and teachers.
- **Informative** Information about examinations and findings from the analysis of results should be made available to all interested parties including teachers, curriculum developers and inspectors.
- **Efficient** The examining, administrative and processing systems should make the best possible use of time and physical, human and financial resources."⁴

NAES is working towards an examination and assessment system that meets international standards both in terms of its technical quality, and its administrative efficiency. This is the essential step on the way to ensuring that Romanian qualifications are going to be recognised within the European Union and beyond. The next step is to set in place the mechanisms of guaranteeing and proving the standards are constantly watched. The two national examinations - the **Capacitate** and the **Baccalaureate** – did not and still do not share the same characteristics in the mental representation of the "Romanian public opinion": while the **Baccalaureate** was always considered as the most prestigious, traditional "*rite de passage*" that a young person must pass before stepping into adulthood, the **Capacitate** examination was seen at the beginning with certain restraint, as any other measure of reform. Now after a few

³ The term 'fair' is used here to encompass a broad range of equity-related issues including equity of opportunity, equity of access, and freedom from bias.

⁴ The principles quoted here were presented in the four position papers (see the references, XXX, *Four Position Papers...* pp. 131-132) prepared at the end of the project for the decision-makers in the Ministry of Education, as guidelines for the educational policy in the field of assessment and examinations.

years already, the general perception on both examinations is a more positive and confident one from the “technical” point of view. In other words, the quality of the exam papers and of the marking schemes managed to convince “the public eye” about the genuine and profound reform in the assessment field.

a) **The Capacitate Examination**, designed and administered by the NAES, was first introduced in 1999. Under the Education Law, this entirely new examination was placed at the end of the compulsory education, *i.e.*, for 14-15 year olds. Its main characteristics are:

- ☞ the important number of students taking the exam (about 260.000 yearly) and their need for information and training;
- ☞ the large number of teachers involved in various roles (invigilators, markers, external evaluators): about 50.000 and their need for specific training;
- ☞ the variable economic standards and resources across the country, and the need to ensure comparable conditions for all the candidates participating to the exam;
- ☞ the need for test designers and item writers to produce, for the first two years, question papers based on the old curricula, and the old-fashioned “unique textbooks”;
- ☞ the need for test designers and subject specialists to produce, for the following years, question papers based on the newly introduced alternative textbooks (in some cases subjects there were up to 10 alternative textbooks per subject!).

The major problems that NAES faced while producing the Capacitate examination in the first years could be enlisted as follows:

- ☞ a relatively short period of time for preparing the first exam, in 1999, namely about eight months;
- ☞ a completely new format for question papers, allowing the gradual transition to assessing students’ higher level skills;
- ☞ organising the pre-testing, followed by the sample-based, national piloting of the exam;
- ☞ providing adequate training for school inspectors, head teachers, and teachers participating in this exam in their very roles and responsibilities;
- ☞ initiating and carrying out an intensive and continuous public information campaign;
- ☞ limited financial resources;
- ☞ the need of finding the specific balance between the “natural” certification function of this exam, and the demanded “selection” function of it.

This year, the Capacitate exam served mainly the **certification purpose**. (The admission into high school is done using a computer programme, the criteria being the passing grade at the Capacitate examination, plus the results on the continuous school-based assessment during the four gymnasium school years.) Its introduction was considered to respond in a satisfactory way to the need of ending the compulsory education with a trustworthy diagnostic of student’s achievement.

b) **The Bacalaureate Examination** was firstly administered in a new format as a NAES responsibility in the Summer of 2000. In the previous year, the preparations of the exam comprised: drawing the guidelines, initiating training programmes for the teachers, and launching a public campaign focusing the intended changes. For the first time, in December 1999 the preparation activities included the pre-testing and trying out of items and test formats on a convenience sample of students (about 250 students per subject, for each of the examination subjects), followed in January 2000 by the action of publishing the model tests for training purposes. This was the key for obtaining a positive public reaction to the introduction of a “moderately new” Bacalaureate examination in the year 2000. This “step-by-step” approach to changing the Romanian Bacalaureate was considered the most adequate at that stage.

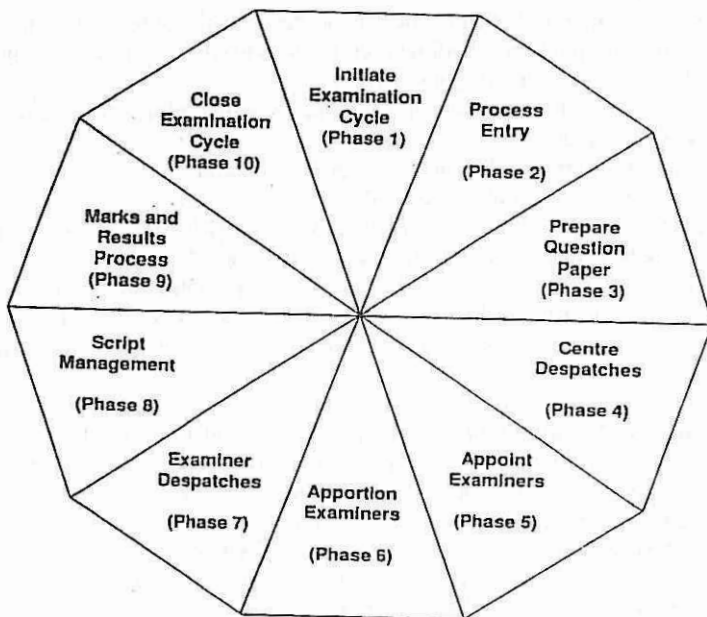
Although NAES's freedom to develop new forms of examination has been restricted mainly by resource constraints, significant improvements have been made in all subjects. These include the introduction of a better mix of item types (ranging from multiple-choice to structured essays in most of the exam subjects), more analytical marking schemes and new approaches to oral assessment, in mother tongue and modern languages. New administration procedures, including printing question papers for all candidates, have been set, as well. Introducing changes to improve the quality of the exam papers from year to year is a constant objective of the working groups co-ordinated by NAES specialists. The best proportion between "traditional" and "more radical" approaches is considered as being the key in the discussions and the debates within the working groups, as well as in the larger debates involving teachers, school directors, and inspectors.

Concomitantly, NAES has strengthened had to strengthen its capacity in a number of complementary areas:

- Planning and conducting large-scale examinations and assessments, *i.e.* ensuring the adequate logistics and administration;
- Establishing good communications with a range of audiences, *i.e.* Public Relations;
- Building up experience in applying psychometric tools, *i.e.* reporting results in a meaningful way.

The public exam has been described as a continuous, spiral-process (see the diagram on the public exams). Each stage has its contribution to the success of the exam and from year to year at each of the stages there are new opportunities of improvement.

Diagram 3: Administrative cycle of public examination [Diagram courtesy of UCLES, presented in: XXX. (2001). Four position papers..., p.220]



In the production cycle, for both national examinations, the basic quality measures have been ensured, not always without problems:

a) Item Writing, Pre-testing and Test Construction

Probably the most visible and rewarding activity in the production of a national exam is the stage of test production. In the first stages, NAES subject officers and subject groups have developed the skills necessary to write and moderate items. This is seen as a continuous and time-consuming process, but essential for obtaining the quality (and quantity!) of items and tests required for each examination session. This is a special problem in Romania where the diversity of school types, the perceived need for a highly secure system, and the safeguard of student interests all contribute to a huge workload for NAES. At Baccalaureate level for example:

- each main exam session is followed by a 're-sit' session allowing eligible students a second chance;
- at each session, multiple variants are required in each subject to accommodate the various 'curriculum profiles' of schools entering candidates; and,
- for each variant up to now, at least five parallel versions are required for security reasons so that the 'real' question paper is chosen and announced in the very day of the exam.

As a result, the number of tests to be produced each year is considerable. Among the alternatives considered by NAES as possibilities to increase the quality of the examinations in the future the following have been considered:

1. "Appointing additional personnel as 'Chief Examiners', under contract, to prepare draft question papers and marking schemes for moderation by NAES Subject Groups;
2. Storing satisfactory items from 'live' examinations in an *item pool* and re-using them in future years.
3. Commissioning, under contract, the preparation of large numbers of discrete items for storage in an *item bank*. (Each question paper would then be constructed according to a specification grid from items in the bank)"⁵

One of the most important measures that have been taken already in the preparation of the exams up to now in Romania is the **pre-testing** of the items and the **piloting** of the exam format. To ensure both in the future as well, there are, however, two major impediments: the *costs* involved and *the security* needed. The quality of the exam items has a price to be paid and this fact became more "overt" once the NAES was producing the first examinations. But "the value for money" produced made the difference to the previous examinations (*i.e.*, the previous Baccalaureates), so this truth already started to be more easily accepted by the police makers.

b) Responsibility for Examination Content

For each exam subject, the mechanism of constructing the pool of items to be pre-tested, piloted and, finally prepared for the real exam, is a "democratic" one. The NAES specialists are monitoring the subject working groups set up and trained in the field of item writing and test development. The scientific responsibility is shared within this extended group, while the strictly "technical" responsibility of the examination paper belongs to the NAES officer specialist in a particular subject.

c) Examination Paper Presentation

⁵ XXX. (2001). *Four Position Papers...*, pp. 134.

One of the major achievements of the new national exams in Romania was the mere fact that each candidate received his / her own printed exam paper. All the efforts have been made for this. However, the high costs associated with producing large numbers of question papers and, perhaps more importantly, fear of breaches in security during printing and distribution are issues to be considered in the future, as well. Maintaining the quality of the exam administration means ensuring equity, quality and administrative efficiency⁶. There are, still, restrictions, but the possibility of a computerised system of test administration and delivery is explored in Romania as well.

d) Marking and Reliability

One of the technical qualities seen as essential for the overall quality of our exams is its **reliability**. Two factors have been considered with great interest: the content of the question paper and the application of new marking strategies. The first was monitored using statistical methods and improved by analysing and interpreting the pre-test, pilot and real exam results. The application of the new, marking strategies implied two aspects: a) the construction of new, analytical marking schemes; and b) the control of the marker reliability coefficients.

Among the measures taken for improving marker reliability coefficients we mention:

- Provision of comprehensive, unambiguous marking schemes, which can be applied easily and efficiently;
- Training of markers and their supervisors in the application of marking schemes;
- Implementation of an effective marker checking/monitoring system;
- Use of 'double-marking' systems – especially for structured essays;

NAES has taken some further steps to strengthen its marker training and monitoring systems by introducing a general examinations manual and general marker training starting with 2001. Moreover, since 2001 in the Capacitate and starting with 2002 in the Bacalaureate, the marking process is done in so called "marking centres" collecting all the exam papers from the exam centres in an area. This is a significant improvement for us.

e) Grading

The centralised database for high-stakes examinations is under construction at NAES. Therefore, post-hoc grading is not a realistic option yet. Consequently, NAES has to design its examination papers and marking schemes so that the mark distributions they produce fit, more or less closely, pre-determined mark thresholds (cut-offs). For example, Bacalaureate papers are supposed to allow more than 75% of students to score more than 45% of the marks. This is possible to be done with certain confidence using items selected by 'expert judgement', pre-tested and analysed, piloted and analysed again, and finally combined to create the test versions.

Among the possibilities explored by NAES concerning grading is **the criteria-related grading** but this still needs extensive research before being applied in the examinations field.

f) Evaluation of Examination Effectiveness

⁶ "Equity: all students presented with the same tasks under the same conditions. Quality: all tests having sufficiently high degrees of reliability and validity. Administrative Efficiency: a secure test delivery system, which makes best use of financial, physical and human resources and which uses methods appropriate to the Romanian context." (XXX (2000). *Four Position Papers* ... p. 135)

NAES started to create its item and tests. The analyses of the pre-testing, piloting and post-exam phases are essential. But this is a “work in progress” still. For the year 2003 NAES is attempting to put post-examination analysis in place for both national exams (up to now this happened only for the Bac exam). Marking a sample of real exam papers for all the subjects, followed by data entry and analysis and ended by a comprehensive final reporting is the general strategy for quality control to be set in place as the general norm.

g) Feedback of Information

NAES has produced and distributed for free in the educational system a wide range of documents to support the introduction of new examinations. In particular, model question papers for Capacitate and the new Bacalaureate exam were produced yearly and published, becoming useful and well-known tools for the teachers in all counties.

Starting with 2003, more post-examinations data will be available on the NAES website. The methods of producing reports for teachers and statistical data for education planners will be improved and diversified. Using the NAES website is considered now as the most cost-effective way to make exam-related documents and information available to the public.

The structuring of the planned information includes the publication of:

- Support documents to assist students and teachers in preparing for examinations (syllabuses, model examinations, past papers, notes for guidance);
- Quantitative and qualitative data on student performance for teachers and curriculum developers (examiners reports, results statistics);
- Quantitative data as to the performance of selected groups, schools, and regions for educational policy planners (statistical data, research reports, general statistics).

h) Broadening the Assessment System

At present, most of NAES's activities are focused on the development and maintenance of major examinations, in particular Capacitate and Bacalaureate. To these, the Summer of 2002 added the graduation examinations of the vocational and apprenticeship schools, exams which are becoming national as well. These will remain 'core functions' for the future. Nevertheless, NAES is responsible already for some other tasks, too. Among them, we mention :

- Extension of alternative school-based assessment (the so called “portfolio movement”) in schools;
- Carrying on the teacher training tasks (via courses, seminars, workshops) in the field of implementing the new school-based assessment methodology;
- Carrying out the programme of national assessments;
- Production of standardised tests for specific purposes.

The degree of progress already achieved in each case is variable. The production of standardised tests is an issue attracting heated pros and cons in Romania. The pros represent the technology-oriented party and the cons the more traditionalist one. The backwash effect of the selection examinations to higher education (some of the faculties are using exclusively multiple-choice items in their exams, for example, the Law School, and the Medical School) had an interesting consequence: the pressure for increasing the number of objective items in the Bacalaureate Exams. In an indirect way, this created the demand for normative testing, *i.e.*, normative interpretation of the outcomes. Hence the need for NAES to produce them.

Examples of such institutions, producing normative testing, arising in Central and Eastern Europe are already known⁷. The question is in the case of Romania if this is going to happen in the national exams as well, or it will remain only an option in some lesser high stakes situations, like the national assessments. Anyway, the basic steps of standardising the test production have already been taken (standardisation of test construction and of marking process, to certain extent). The implications of the standardisation, from costs to expected effects, is the subject of a comprehensive study at NAES. The results are expected by the end of the year.

On the other hand, for those activities which can be de-centralised (like the training for reforming the school-based assessment), the NAES expertise is used in a good partnership with the local inspectorates and even with some schools all over the country.

The general strategy of NAES has in view the following actions and measures to improve the quality of the national exams as educational products provided under the qualitative standards agreed:

☞ **Increase test production capacity.** This is a requirement becoming more and more important since one of the major tasks is agreed to be in the future the production of standardised tests. One of the solutions considered is training and eventually hiring under contract some more item writers for all the subjects in the exams. Another one is strengthening and diversifying the NAES psychometric capability, *i.e.*, the most effective analysis and reporting strategies.

☞ **Increase inter-marker reliability.** One of the *post hoc* exam analysis conducted using the marking – remarking procedure with real exam papers in the Baccalaureate revealed rather significant differences occurring when the same marking schemes are applied by different markers under different conditions⁸. Reducing these differences is considered a powerful measure of quality control. The first step is conducting a qualitative research on the extent of marker variation and on the reasons for this variation. Having in view that the training of the markers using the marking manual already proved to be efficient, but not sufficient, some other measures (like introducing some selection professional criteria for markers) are explored.

☞ **Maintain pre-testing.** Item pre-testing and exam paper piloting have been the “strong points” of the strategy of developing new examination system in Romania. But making these actions systematic and consistent over time implies significant commitment of financial resources. This is one of the battles to be won in the future!

☞ **Systematise post-exam analysis.** Reporting the exam results to students is one of the actions ensured within satisfactory limit of time today: the results are communicated in no more than one week after the exam takes place, for all the subjects! From the quality point of view, this phenomenon has some consequences which have not been entirely explored yet. One of them is though the fact that the post-exam analysis is not conducted in the depth that it could be. In fact, what is still to be developed is the very need of the policy makers to benefit from these exam data when taking the decisions. Sampling of scripts, entry of item level data, analysis and reporting are time and resource consuming actions, therefore they are not going

⁷ Two articles published in the past years by *Assessment and Education* review are summing up the achievements in the field in these parts of Europe (see the references, Bakker (1999) and West and Crighton (1999). For example, in the Russian Federation the State Testing Service (STC), which is an independent institution under the umbrella of the Moscow State Pedagogical University. The type of diagnosis offered and its context are reflected in the fact that students are paying for these tests, but the results are recognised by eight Moscow universities. In Slovenia, the National Examination Centre (NIC) produces normative outputs of the students in the Matura exam.

⁸ See the references: Stoica A.; Mihail, R.; Bethell, G. (2001), pp. 31-33.

to be efficient & effective enough, proving their real "value for money" if not taken into consideration when the important decisions are made concerning the examination policy.

☞ **Improve the feedback system.** We are in the middle of the process of establishing "the assessment culture" within our educational system. This implies first of all to create the need for making all these related assessment data meaningful for the educational partners: students, teachers, parents, school directors, inspectors, educational NGO's. And this is a long term task which needs to be tackled from various perspectives: by training and monitoring the subject working groups specialists in drafting the exam reports for teachers; by exploring the most efficient ways of presenting statistical data to policy makers; by identifying the most powerful and cost effective ways of disseminating exam-related information.

3. THE ASSESSMENT CONTEXT: NATIONAL ASSESSMENT, SCHOOL-BASED ASSESSMENT, INTERNATIONAL ASSESSMENT PROGRAMMES

Traditionally, in Romania the backwash effect of the national examinations is seen as one of "the necessary bad things" of the education. No in-depth research of the phenomenon was conducted yet and now, that the national examinations were, to a certain extent, "secured" from the educational reform point of view, the chances of dedicating new funds to such an enterprise are less and less realistic projections. Yet, there is a comparably powerful "wave of thought" which places the deserved importance at the level of school-based assessment. On NAES agenda the national assessment system to be extended, **the school-based assessment methodology**, and **the international assessment programmes** in which Romania takes place are seen as equally important directions to achieve progress.

a) *The National Assessments*

Up to now, there have been conducted three **national assessments (NA)** at the end of primary education (grade 4 level): in 1995, in 1998, and in 2000.

The main goal of these national assessments (reinforced by the NA conducted in the year 2000) was to obtain accurate and efficient **estimates of the knowledge and skills** of the students in the system at the end of primary education. The target population consisted of all the students in the fourth grade of primary education (including the students from minority groups that are taught in languages other than Romanian, when possible). Achievements in various domains in Mathematics, Romanian language and Sciences at the end of grade 4 were reported. In addition, NA findings were linked with the assessment requirements and techniques primary school teachers are encouraged to currently use in the classroom. This includes matching student achievement to band descriptors. For each behavioural domain in the three subjects tested, three levels of achievement are defined: Satisfactory (s), Good (*bine* = b) and Very Good (*foarte bine* = fb). For each level extensive descriptions are provided in qualitative, "can do" terms.

The 2000 NA was conducted using a nationally representative sample of students and schools all over the country. The sampling strategy used comprised the following:

- "Two *complete* tests in each subject have been used through a 'matrix sampling' strategy;
- Test booklets were allocated 'spirally' to ensure random distribution in a school;
- Schools have been sampled *explicitly* on the variables uni-multigrade and urban-rural only and then *implicitly* on the region variable;
- Sample schools have been drawn at random, and then *all* grade 4 students within the school have been selected."⁹

⁹ See: XXX, (2001), *Four Position Papers ...*, pp.159-160.

The basic role of the National Assessment at the end of grade four was **to measure the validity of the educational system's objectives in relation to its outputs**. Up to now, there is a general reluctance in considering these results as a basis for measuring the effectiveness and efficiency of the system as a whole, as well as a criterion for checking accountability.

The type of information provided in the final report released as a product of the NA comprised: evidence of differences in school achievement related to gender, ethnicity, residential area and socio-economic background; average achievement reported to boys and girls differences, urban and rural residence, various linguistic groups. Data on students' performance tested highlighted the strengths and weaknesses within curriculum areas and skills, giving first hand information on how the intended curricula have been implemented. This was one of most important issues, since the introduction of the new curriculum was followed shortly by the introduction of the new assessment system in primary education (replacing the grades with the "qualifications" described in band descriptors).

Information on student achievement in key curriculum areas will be collected on a regular basis in order to support the monitoring of changes over time. This will produce the evidence relevant for discussion on the variation of educational standards over time.

After conducting three national assessments, the most vulnerable part of the whole process seems to be **the dissemination of information** in such a way that it produces the expected action from the decision point of view.

The solution chosen up to now was to produce different reports for various stakeholders, so that the outcomes of the achievement tests administered are directly linked to some factors that might have influenced the outcomes and might be addressed: *i.e.*, background variables and the trends over time. Suggestions on the identification of factors that might have influenced the outcomes and might be addressed in the future at various levels are made as well.

The dissemination techniques employed by now (through which schools or teachers can get access to the actual or equivalent instruments as used in the national assessment effort, and compare results of own students to national averages) did not prove to have the expected effectiveness. The impact on practise and on policy was minimal. The "bare" outcomes were seen as the most interesting thing, producing debates on the level of "thought" difficulty.

The general strategy of NAES has in view the following actions and measures to improve the quality of the national assessments as educational products provided under the qualitative standards agreed:

☞ **To continue the practice of national assessment** at the end of primary education in order to allow the comparisons and the study of trends over time in Reading, Mathematics and Sciences basic literacy over time.

☞ **To complement** the Grade 4 assessment with some other key stage assessments (grades 8 and probably 11), establishing some strong links in the system of national assessments.

☞ **To closely inspect** the validity and adequacy of the educational objectives and its variation over time. Some of the literacy skills investigated in the Grade 4 assessments in 1998 and 2000 have been compared with those investigated in PIRLS for example. It is intended that some items could be possibly linked or even anchored with the ones used in some international assessments (like PISA+ and TIMSS), where appropriate, in order to see how results can compare to those in other EU countries.

☞ **To relate the outcomes of the learning process** (the results of the NA) to important background variables (like socio-economic status, school ethos, teaching trends a.s.o.) and make visible the evolution of the trends over time.

☞ **To continuously improve and diversify the dissemination techniques** of the national assessment results.

b) School-based assessment methodology

The main direction in which NAES activated by now is teacher training in the principles of evaluation, as well as in assessment methods and techniques. The cascade model of teacher training was used combined with a very active promotion of the NAES publications (over 100 titles in a few years!). Assessment guides for each subject and for primary education have been edited and distributed in all schools, all over the country.

All the changes in the assessment field, as the introduction of band descriptors in primary education, or the introduction of alternative assessment methods and instruments like portfolio and projects in current assessments in gymnasium and high school have been documented by publications, which made them very popular among teachers.

c) International Assessments

The fact that Romania participates in international assessment projects like TIMSS, PISA+, PIRLS is another measure of increasing the quality of the assessment diagnosis.

Participating in international assessments is thought of having the following advantages:

- "They provide a comparative framework in assessing student achievement and curricular provision. They can also show the extent to which the treatment of common curricular areas differs across countries.
- They appear to be a strong agent for change. In many countries (including the United States, Canada, Germany, Denmark and Japan) findings of international assessments have led to changes in educational policies.
- They strengthen the assessment agencies involved by giving them the experience of rigorous sampling, item review, printing, distribution, supervision, scoring, data entry and drafting of national reports according to an agreed timetable. This greatly increases local capacity to conduct research and national assessments.
- They can reduce the staffing requirements and costs of sophisticated assessments because sampling designs, instruments, and analytical software are developed in collaboration with other countries."¹⁰

For Romania, taking part in international assessments plays an important role in stimulating the development of the system of national assessments. For example, the research methodology employed in the OECD-PISA project proved to be very useful in moderating the marking schemes and in elaborating the training manuals of the national assessment, as well as in giving the direction for establishing some very important quality indicators as benchmarks. This is considered desirable in terms of increasing capacity for educational action-research on a national level, yet not so easy to sustain in the long run.

4. PERSPECTIVES

The establishment of NAES, and its rapid recognition as a trustworthy professional member of the Romanian educational community, is one of the success stories of our educational reform. But improving the quality of the educational assessment beyond the setting up

¹⁰ See the references: XXX, (2002). *Four Position Papers...*, p. 164.

of the institutional and logistical infrastructure is in practice more challenging to achieve than the very first steps.

Among the actions to increasing the quality of its products in the near future NAES considers the introduction of the ISO 9001 standard. This way the EU quality assurance requirements will be met and observed in a more 'overt', transparent and documented way. But the whole process is a time and resource consuming one (as proved by the experience of the national centre in Slovenia – RIC, which already adopted the system). NAES is a small organisation. The workload on national examinations and assessments is increasing and public expectations are increasing as a natural consequence. This is the reason for these quality assurance procedures are considered as being one of the medium-term projects.

The very visible advantages of introducing a highly technological system of test administration and transparent reporting of the results in the national examinations (a successful example was given by the Board of Krakow administration of the Nowa Matura pilot examination, as presented in the AEA-Europe Annual Conference in Krakow, November 2001) are encouraging, strongly supporting the change. The costs, the implications and the consequences of the *centralised – decentralised* relationship are though aspects which still have to be seriously taken into consideration and carefully analysed within each educational system after the innovation is stabilised in its 'natural educational environment'.

The facets of the sustainability of the achievements in the field of examination reform and national assessments are very complex. In the case of Romania sustaining the developments means increasing the quality of the products. This translates in our case into ensuring the conditions for improving the technical quality of reporting the results and outcomes of the national exams and assessments. Informing the policy and decision makers is no more sufficient: the battle is in the field of building up an assessment culture where all the "educational actors" from decision makers to students and parents are addressed in their very specific roles and the decision is taken on the basis of the professional judgement.

One important opportunity to be yet created and considered in the future seems to be the construction of regional research partnerships on common interest projects in Central and Eastern Europe. Issues like: searching for new means of increasing the weight of complex skills measured in the real exams and national assessments; exploring new effective possibilities of meaningful reporting of the outcomes; increasing the direct impact of the international assessments' outcomes on policy decision; exploring the dimensions of the examinations backwash effects in national assessment systems; exploring the adequacy and consequences of using certain item formats in new examinations, are only a few examples of topics which could be shared and raise common interest and exchange of experiences and solutions.

If the end of the '90 made the researchers and education specialists in the assessment and examination field to favourably comment on the increase of "institutional stability" of the assessment systems under reform in Central and East European countries, the next decade will have to bring the "settlement" needed for securing and increasing the quality in educational diagnosis in this part of the world.

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