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21. November 2008

Online at <http://mpra.ub.uni-muenchen.de/45245/>

MPRA Paper No. 45245, posted 20. March 2013 12:20 UTC

Some aspects regarding efficiency and meaning of indicators used in Romanian Educational System

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Abstract: - The analysis of the competitive capacity of the organizations is trying to answer to questions like: how are the resources used for and which is the level of this consumption. So we are following the capacity of using these resources into the better way. It follows therefore that the degree of recovery and the saving thereof. The social efficiency depends on how they are satisfied the demands of employees in relation to activities that place, with reference to improving the standard of living, working conditions, their position and role.

Key-Words: educational system, efficiency, social efficiency, resources, results, system indicators, life long learning

1 Introduction

The people's life and the economic activity are guided by a fundamental principle: the principle of efficiency. According with this, the people expect to obtain a maximum output with a minimum effort. This is expressed by the ratio of productivity as a rate between effect and effort.

The quantum of this ratio is depending on quantity and quality of resources and results.

The meaning of the efficiency of economic activity, the use of resources related to different organizational levels of the economy, the main interests, where the economic activity takes place, etc.

So it appears the need of increasing the degree of involvement of staff in business management and diversifying ways of stimulating and motivation.

In economic literature emphasizes the usefulness of indicators for international comparisons [1], for determining variables parameters [2], qualitative analysis [3], for decision making [4] or the evaluation of educational system [5].

2 The use of system indicators in National System of Education

Through the system of indicators developed by the European Union monitors the implementation of the Lisbon Strategy in the member countries. This

strategy has set the common objective that the member countries of the EU to develop the most advanced and dynamic knowledge-based economy till 2010.

The tools used is “open method of cooperation” involving the construction of consortia of states interested in implementing the objectives proposed in “The detailed work schedule”.

As these partnerships are highly variable, it was considered appropriate to establish a common system of benchmarks indicators.

The indicators are used to monitor the progress in dynamics, to ensure comparability and facilitate cooperation (especially in terms of the transfer of positive experiences). In order to operationalize the Lisbon Strategies in education and training, the Commission set out five benchmarks whose fulfillment will be followed by indicators set.

The National Educational System includes all levels of initially education (primary education, secondary and high school education and universities education) and vocational life long learning (VLLL).

According to this classification, VLLL is occupying a special place, compatible with other models of classification, which takes into account the priority that must be granted by the European Union and assumed by Romania concerning the development of life long learning. In this respect,

because in Romania participation in VLLL represents one of the lowest levels in Europe, a rigorous monitoring, in terms of a broader set of indicators, it is absolutely necessary.

The list of indicators is comprehensive, trying to contain the abundance and diversity of components, dimensions and aspects of education, though without being exhaustive.

From this list can be extracted a set of basic indicators (30-40 indicators) to serve periodic assessment of the state system, its components, as well as the impact of educational policies. The set of basic indicators could thus provide the necessary information for the report on state education, according to the Article 150 (3) of the Education Act, which states: "The Ministry of Education and Research forward to the annual report on the status of the national system of education, up to Oct. 15. At the same time, are given directions and priorities for the development of education and pre-university education. The annual report is published". The annual report could be accompanied by a statistical annex, based on the same set of indicators, similar to "L'etat de l'Ecole" (France), "Education in States and Nations"(USA), " Education Statistics" (UK), "Education at a Glance" (OECD), or "Key Data on Education" (EU).

These standardized statements covers a wide variety of issues, but not any item or phenomenon interested in the educational policies. For this reason, there is a need for a process of selection, different environments and educational institutions inventories or sets of indicators, a comprehensive system of indicators for education NSEI [6]. This system is compatible with the European Statistical System developed by Eurostat.

The indicator is based on data from the following sources: the exhaustive on the educational units developed by the National Institute of Statistics in cooperation with MEC, the investigation of labor in households (AMIGO) and complementary modules on the long life learning; investigation of long life learning (FORPRO) survey carried out by UNESCO, OECD and Eurostat through a questionnaire UOE which represents a data collection system from different countries. The primary data underlying all the indicators are stored in BNDE. These data are updated and allow the calculation of indicators, obviously, not a finite list (in other systems of

education, a list of these indicators reach several hundred).

3. Data analysis and interpretation of panel data results

The commitment of human resources in the educational system was analyzed from the perspective of the following indicators:

3.1 The dynamic of employees' number of staff in the education system.

One of the objectives of the national system of education is to achieve a best personal policy in the context of society, through its correlation with demographic developments and the school population.

The number of the teaching staff has increased by nearly 3,000 employees in the school year 2007/2008, compared with the previous year, where national education system has lost approximately 9,000 employees, compared with the previous year. The dynamics of personnel in all levels of education is relatively convergence with the evolution of the number of students. Thus, the levels at which increases the number of teachers (preschool and school) are those in which staff and students have increased. The only divergent appears to higher education at the level of school / academic 2007/2008: while the staff was reduced by approximately 3% and students' number have increased by over 9%. At the level of the academic year 2006/2007 may notice that at all levels of education there is a decrease of approximately 1.7% compared with the previous year (4827 persons).

In comparison with the previous year, 2006/2007, when primary and secondary education we may see a decrease of more than 4%. The same trend is negative for secondary education, and post-secondary school, the decrease being approximately 3%. The only level where there is a slight increase from the previous year, approximately 2%, are at preschool and higher education.

At the level of academic year 2007/2008, to emphasize a positive development is emphasized by education high school staff (almost 3%) and in secondary education (7%). In other levels of education are recorded decreases of the number of staff: less significant in primary and secondary education (about 1%) and emphasized in vocational education (9%), post high-school education (12%)

and higher education (3%). Analyzing only the teachers, it is noted that, at all levels of education, are recorded at the level of school / university a decrease of approximately 1.3% compared with the previous school year.

The weight of teachers in total staff of the system of education has decreased at all levels of education. In the school year 2007/2008, this represents 71.1%, 1.5 percentage points less compared with the previous year 2006/2007, the weight of teachers in total staff of the system of education is 72, 6%, 0.4 percentage points higher compared with the previous year, primary and secondary education continues to record the highest weight of the levels of education (78.9%). In the year 2007/2008, the highest weight of the teaching staff continues to register in primary and secondary education (78.1%), while the lower in higher education (56.9%). At the level of school year 2006/2007 also higher education are still the lowest percentage (56.9%), even if they may notice an increase of more than 2 percentage points in comparison with that of the previous year. Over one third of teachers - 34.4% (2007/2008), 34.79% (year 2007/2008) - operating in rural areas, remarking thus, a higher concentration of teaching staff in urban areas. This percentage is slightly lower compared with that recorded in the previous year. In the case of primary and secondary school, the number of teachers in rural areas is decreasing compared to previous year, while the number of teachers in urban areas there is a positive trend. Also, in secondary education decreased number of teachers in rural areas is more pronounced. This state of affairs is explained by evolution as the population of students, and the structure of the network this schools areas.

3.2 The number of pupils per a teacher.

This indicator reflects the ratio of pupils / students per teacher in a school year under the formula calculation (1). The indicator is used to measure the level of human resources allocated to the number of pupils. The value of the report is evaluated according to established rules official at the system level for each level of education in Romania is not stipulated in the official value of this indicator for different levels of education

$$NCD^t_h = N^t_h / CD^t_h \quad (1)$$

where:

NCD^t_h - the number of pupils per a teacher in the school year t, into the h the level of education;

N^t_h - the total number of students enrolled in the school year t, into the h the level of education;

CD^t_h - the total number of teachers who carry out teaching in the school year t, into the h the level of education;

h - represents a certain educational level, according to the classification ISCED 97;

This indicator is particularly important for policies on wages and training of teachers in the system and generally offers a picture of the resources allocated for education and policies on quality assurance.

In comparison with the previous school year, the number of pupils / students per teacher has increased in tertiary education has remained constant for the other levels of schooling. Secondary education in rural areas continues to record the lowest report students / teacher. Except for making higher education, where there has been a rising trend specifically the period under review, increasing the ratio to 26 students / teacher. The explanation of this situation lies in the increasing importance of the population of students with low numbers of teaching staff in higher education

The student / teacher discrepancies registers on the average residence at all levels of education.

The largest discrepancy should find in education. In this case, rural areas continue to be disadvantaged (20 pupils / teacher, compared to 16 in urban), although there has been a slight improvement in the situation, compared with the previous school year when the ratio was 21.

Differences in the average residence are kept in primary and secondary education. In these cases, the situation is inverse in rural areas there with 3 and 2 students / teacher less than urban areas. Secondary education in rural areas is continuing to register the lowest report students / teacher in the whole educational system (10 pupils to 1 teacher).

At the upper secondary level is recorded, also a difference in the average residence, similar to the previous school year: 15 students / teacher in urban and 18 students / teacher in rural areas

In the school year 2007/2008, the number of pupils / students per teacher has made constant values, compared with the previous school year, when the increase / decrease the number of students

has been accompanied by similar variations of the number of teaching staff.

4. Final remarks

In the context of the impressive development tools, indicators for Educational System have become indispensable tools in the definition, implementation and evaluation of educational policies. Thus, the use of indicators is favored by the following circumstances:

- The need for public liability on the basis of precise criteria for measuring progress, in terms of the education systems use more resources, the Ministries and other public authorities must realize through regular reporting and processed data, expressed through indicators;

- The need for comparability, with some references, in the context of globalization and regional integration (eg European educational space, goal of "Lisbon Strategy");

- Interest in decentralization and quality assurance, which has as a consequence the empowerment of educational units, the use of precise criteria for evaluating and reporting on common indicators;

- Approaching education as an integrated vision, who considered education, training and social cohesion, expresses the interest in the use of comprehensive data bank, which may incorporate various aspects of human resources;

- The inclusion of lifelong learning as a basic principle of educational policies, which require the development and diversification of systems analysis are able to capture the dynamic processes of learning in a variety of media and educational institutions.

For ease of use, indicators should be grouped in areas of educational policies, the levels of components or systems of education, the priorities and objectives of the reform programs. These ranks are very flexible, may be adjusted depending on the evolution of the needs analysis and potential beneficiaries. For instance, two specialized centers of the EU (Eurostat and Eurydice) use a common system of classification, based on the references ISCED.

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