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Complex Evaluation of Efficiency and Quality of Educational Services: Current Approaches

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Issues considered in the article are related to the evaluation of efficiency and quality of education at a large-scale level.

For this kind of evaluation the author suggests employing a concept of outcome/result-focused budgeting. In addition, one can use methods of monitoring and surveying target population's satisfaction. It is suggested that the obtained data can be used for producing an evaluation summary of compliance between the quality of education and educational standards. A proposed approach which can make it possible to employ the above mentioned methods is clustering secondary level educational institutions. Clustering is based on the criterion of efficiency and performance success. The employment of the clustering approach will contribute to the development of a more effective financial policy and based on it managerial decisions.

Keywords: educational services, system of education, result-focused budgeting, clusters, monitoring, social survey, evaluation summary of educational services quality, educational efficiency, performance success.

Educational reforms during the stage of implementation necessitate not only the evaluation of budgeting effectiveness, they may also create a need in a new budgeting concept which considers the use multiple sources for financing an educational institution. From the literature about the evaluation of effectiveness of educational services one can sense that there have not been developed clear indicators of correlation between a style of managing financial resources and efficiency of services of an educational institution; there is also a notable lack of agreement in approaches to creating an effective budgeting system in education, to developing reliable measurement tools for evaluation

of economic and financial achievements of educational institutions.

Research papers of Russian and overseas authors dwell on a number of issues in education, such as: financial resources management, effectiveness of budget allocations, evaluation of achievements in middle-term planning and programme-driven budgeting, the use of modern management technologies.

However, these papers do not discuss a systematic approach to effective financial management; there is little information about the influence of the result-focused budgeting on social and economic performance of educational institutions.

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While planning a result-focused budget one should consider the following articles

1. costs;
2. performance results (the amount of delivered services);
3. effectiveness of performance (end-users' satisfaction); this article reflects tactical goals;
4. the quality of delivered services;
5. the level of achievement of the planned goals;
6. the effectiveness in social and economic performance.

One should mention that educational services differ from other services by their nature. These differences have to be considered in evaluation of the effectiveness and performance achievements of educational institutions. There is a number of specific features which are characteristic of educational services.

Firstly, educational services are difficult to measure. Lectures, seminars and workshops which are delivered by teachers can not be turned into a tangible product. Thus in order to attract customers educational institutions familiarise them with their licences, certificates, letters of state accreditation. Prospect customers can learn about institutional curricular, offered degree courses and a variety of teaching approaches and techniques practiced by the institution.

Secondly, the processes of service delivery and service receiving in education take place simultaneously.

Thirdly, like any other kind of service, an educational service is an integral part of its provider, that is, of an individual who is responsible for a service delivery. However, there may be specific features. For example, some tertiary level educational institutions can boast their own original methods, unique courses, delivered exclusively by their tutors and available only for their students, they can have strong scientific schools.

Fourthly, as any service, an educational service can be subject to variations in a quality level. An educational service depends largely on a professional level of a teacher, their responsibility and diligence, their health level and morale. Besides, an educational service is also influenced by the resources base. Current degree standards give a range of choices in subjects to be taught to educational institutions, which can not but influence the quality level of delivered services. A professional level of graduates from different educational institutions will be different although they may have a similar qualification and similar grades in their official transcripts.

Fifthly, educational services cannot be stored; nevertheless they have certain specificity. As it has been mentioned above one can not produce an educational service and store it till selling, but one can think of a service concept in advance; it is possible to develop a syllabus, course outline and teaching materials, traditional and ICT. Still information which a student learns is a rather perishable product, a student may forget it and it may become out-dated. Thus, there emerges a necessity in continuous professional development, it training courses which update a specialist and inform them of the latest achievements in their area.

Educational services differ from other non-material services by their consumer properties (consumer costs): they satisfy needs in moral and intellectual development of end-users; as well as providing for a customer an opportunity in gaining a sought qualification. Educational services can be characterised by the following:

- the level of a service intake depends on a customer's background and learning experience, on their capability and willingness to receive a service;
- receiving a service can lead to a further improvement of the quality of workforce

- for a customer educational services' benefits are always suspended;
 - educational services, as a rule, are more costly than other services, this is a result of an educational service provider's high qualification;
 - Educational services are beneficial not only for an individual receiving a service but effectively for the society in general.
1. improvement of the quality of education (of educational service delivery), improvement of efficiency of educational institutions
 2. making education more accessible (abiding by constitutionally guaranteed rights for citizens)
 3. increasing the efficiency of financing in education (maximizing results within budget limitations)
 4. increasing the transparency of budget allocation

The necessity of introduction of a result-focused budgeting system is proved by practices of its implementation in education of highly developed countries.

Australia, Canada, Finland and Sweden have been using the system of evaluation of social services effectiveness, alongside with the effectiveness of their planning, since 1980s. In all these countries there functions a management and quality control system for educational services, which provides necessary data for the evaluation of efficiency of educational services. However, one can notice different approaches not only in methodology of developing planning and budgeting systems, but also in interpreting the efficiency of educational services. If one takes Australia, Denmark and France, these countries base their interpretations on both qualitative and quantitative data. Canada, Sweden and Great Britain, on the other hand, opt for quantitative data for evaluation of educational institutions efficiency. Whereas in Finland they use quantitative data only if qualitative methods can not be implemented. The majority of countries who have reformed their systems of budget monitoring obtain their data for evaluation from customer surveys. These surveys serve as barometers for customer satisfaction and for identifying the inadequate quality of educational programmes.

The major directions of methodology development in the Russian Federation are the following:

Goals are expected to be achieved with the following:

- dividing budget authorisation – introduction of subventions to support the implementations of major educational programmes;
- budget planning based on per capita principle;
- introducing the norm of meeting educational standards as a required minimum for budget effectiveness;
- considering individual learners' needs as a tool for improving the quality of an educational service;
- Developing a system of reliable indicators for monitoring the efficiency, accessibility and quality in education.

For successful development of the budget system an increase in the efficiency of educational services is one of the crucial factors for the country's social and economic development. Economic gains from delivering efficient educational services depend also on the scale of their accessibility in educational institutions. An efficient educational service is an important factor in social satisfaction and effective functioning of the budget system.

After the Presidents' Decree of 28.06.07 # 825 "Performance evaluation of the local executive bodies in the Russian Federation" there has started a process of developing a system of quality evaluation of different educational models

employed at a regional level. Quality evaluation systems in question are expected to be used for measuring outcomes of complex educational projects aimed at modernizing local educational systems.

The aim of the suggested by the author approach is development of mechanisms for evaluation of the executive bodies' performance efficiency. The points of evaluation are effective budget expenditure, dynamic in indicators for education quality change, the level of implementation of new management principles and approaches which provide for more efficient regional management models, including those in education.

Evaluation results, according to the approach, will allow identifying problem areas requiring urgent addressing by regional and municipal authorities. They will also provide data for making a specific action plan aimed at increasing the efficiency of regional executive bodies performance, namely they will allow identifying ineffective budget expenditures; in addition it will be possible to identify unused resources (financial, material, technical, human, etc) in order to use them for educational staff pay rise, for increasing the quality and range of services.

Data required for efficiency evaluation are taken from official governmental reports, from governmental statistic and business statistic, and also from population surveys.

In the Krasnoyarsk Territory there exist standards about the quality of educational services in primary, secondary, upper secondary and commercial education.

The mentioned standards are aimed at providing proper service delivery and thus securing citizens' rights for quality primary, secondary, upper secondary and commercial education.

In order to maintain a proper level of the delivered services in the Krasnoyarsk Territory

evaluations are carried out to check that factual educational services correspond to the level prescribed by the standards¹.

The main goals in evaluation of the compliance between quality of educational services and the quality standards are the following:

- Systematic analysis and evaluation of the gathered information about the quality of delivered services and about their correspondence to the quality prescribed by the standards;
- Providing the information about the quality of educational services to the Territorial executive bodies and population of the Territory.

The evaluation of the compliance between educational services quality and the standards is held by the educational agency on a quarterly basis. The evaluation is held with the use of the following mechanisms:

1. Monitoring of the services quality against the standards.
2. Surveying the population in order to find out the level of their satisfaction with the quality of delivered educational services.

The following are the criteria for holding regular monitoring procedures:

- Categories of end-users;
- Operational model of educational institution
- The range of provided services;
- Transparency and accessibility of information for customers before requesting a service and while a delivery stage;
- Period of services delivery;
- Customers' complaints.

¹ Decree of the Territory Administration of 27.06.2007 #258-н "Towards establishing evaluation procedure in checking the correspondence of delivered educational services to prescribed quality standards and considering the obtained results in the prospective budget planning".

Table 1. Compliance of educational services quality informed by monitoring procedures

| Criteria | Significant value (OC1) | Value interpretation |
|---|-------------------------|--|
| No divergences discovered as a result of monitoring procedures | 1,0 | Provided services comply with the quality standards |
| Sporadic divergences from the standard requirements | 0,5 | On the whole provided services comply with the quality standards |
| Numerous divergences (more than 5) discovered as a result of monitoring procedures, failure to eliminate a number of divergences discovered during previously held monitoring | 0 | Provided services do not comply with the quality standards |

OC1 – a weight parameter of compliance between educational services quality and standards quality informed by monitoring procedures of a separate educational service.

Table 2. Compliance of educational services quality informed by population surveying

| Criteria | Significant value (OC2) | Value interpretation |
|---|-------------------------|--|
| More than 70% of surveyed population in the Krasnoyarsk Territory are satisfied with the quality of provided educational services | 1,0 | Provided services comply with the quality standards |
| 50-70% of surveyed population in the Krasnoyarsk Territory are satisfied with the quality of provided educational services | 0,5 | On the whole provided services comply with the quality standards |
| Less than 50% of surveyed population in the Krasnoyarsk Territory are satisfied with the quality of provided educational services | 0 | Provided services do not comply with the quality standards |

OC2 – a weight parameter of compliance between educational services quality and standards quality informed by surveying population about a separate educational service.

Below are the evaluation criteria for monitoring the compliance of educational services quality to the educational standards:

Criteria of compliance of educational services quality with quality standards informed by population surveying include the following:

Both of the above presented weight parameters are later used for making an evaluation summary of compliance between educational services quality and the quality standards

Below is the formula for calculation an evaluation summary value based on the both weight parameters, monitoring procedures and population surveying:

$$OC \text{ (summary)} = 0.5 \times OC1 + 0.5 \times OC2 \quad (1)$$

Meanings: OC (summary) - evaluation summary value of compliance between educational services quality and the quality standards;

OC1 - a weight parameter of compliance between educational services quality and standards quality informed by monitoring procedures of a separate educational service.

OC2 – a weight parameter of compliance between educational services quality and standards quality informed by population surveying.

If an evaluation summary is based on the weight parameters of monitoring procedures, the suggested formula is the following:

$$OC \text{ (summary)} = OC1$$

Table 3. Evaluation summary values of compliance between educational services quality and the quality standards

| Values | Value interpretation |
|----------------------------------|---|
| OC summary=1 | provided services are in full compliance with the quality standards |
| $0.5 \leq \text{OC summary} < 1$ | on the whole provided services are in compliance with the quality standards |
| OC summary < 0.5 | provided services fail to comply with the quality standards |

Table 4. Correlation between parameter groups and institutional aims

| Parameter groups | Aim to achieve |
|--|---|
| 1. Quality of education | provision of quality education to population in order to guarantee social mobility and to promote lowering social and economic stratification |
| 2. Professional qualification of staff | increasing the level of staff professional qualification and the quality of tutorials |
| 3. Development of extracurricular educational services | development of individual's creativity |
| 4. A system of graduates appointment | increasing students employability, preparing them for further education |
| 5. Participation of students and staff in conferences, contests, olympiads | providing staff and students with opportunities for self-development, increasing institutional transparency |
| 6. Using a budget network | efficient use of available resources |
| 7. Financial resources | improving financial management and decreasing inefficient institutional expenditure |

Meanings: evaluation summary value of compliance between educational services quality and the quality standards for a separate educational service;

OC1 - a weight parameter of compliance between educational services quality and standards quality informed by monitoring procedures.

Table 3 below offers a range of evaluation summary values and their interpretations.

Evaluation results of compliance between educational services quality and the quality standards are considered in the following situations:

- Producing a budget report of the Krasnoyarsk Territory;
- Planning a prospect year budget of the Krasnoyarsk Territory;
- Proposing changes to a range of educational services, quality standards;

- Project proposals for educational services for a prospect financial year

While developing a methodological approach one should identify basic criteria for measuring efficiency and performance success of an educational institution.

A set of tools for measuring efficiency and performance success of an educational institution should be referred to as information system of efficiency evaluation ('information system' hereafter). One parameter can correlate only with one activity aspect (e.g. academic progress, payment expenditure, etc); the whole system may provide a broader picture of various activity aspects (in the aggregate).

Basic requirements towards the information system are the following:

1. it should reflect priorities in educational institutions' activity and reflect their aims and objectives.

2. it should communicate its accessibility and effectiveness to potential users.
3. it should communicate the idea of correlation between aims and objectives and major directions in institution's activity.
4. the system in question should be integrated into institutional activities, where it forms a part of planning and management processes.
5. cost efficiency: resources used for gathering information in order to hold evaluation should be paid back by the results of the evaluation.

Parameters of institutional efficiency and performance success can be classified into groups which reflect task achievement in each group. Grouping the parameters provides a wider information data about achievement in concrete directions of institutional activity. It also correlates with the above mentioned requirements to an information system, such as reflecting priorities, accessibility and effectiveness, and correlation between aims and major directions. This grouping accounts for the fact that different users may be interested in different parameters.

Educational institutions monitoring has been developed with the idea of optimising cost effectiveness in mind. Every group of parameters correlates with an institutional aim, which, in its turn, decides on specific parameters belonging to each group.

There are three stages of educational institution monitoring:

First stage – evaluation of an institution is held in order to find out the level of compliance between the institutional main parameters and executive body requirements to educational services quality.

Second stage – efficiency evaluation of each institution is held in order to find out top achievers among institutions in each parameter.

Third stage – summary evaluation is produced in order to rank the institutions on the basis of their efficiency and performance results. The obtained ranking serves as a basis matrix development.

For the purposes of effective strategic management and financial stimulation of educational institutions it is proposed to group them according to the results included into the matrix.

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