Systematization of methods and ways of personnel analysis and evaluation in an educational organization

Sistematización de métodos y formas de análisis y evaluación de personal en una organización educativa

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ABSTRACT:
This article considers and systematizes the existing methods, types, techniques and ways of personnel analysis and evaluation and presents recommendations on their application in the practice of personnel management in an educational organization. The information obtained through the evaluation procedures significantly expands and qualitatively enriches the personnel database and allows for the continuous monitoring of personnel's conditions, whose task is to provide managers with prompt access to information and to make reasonable managerial decisions. With a large variety of systems for personnel analysis and evaluation, when choosing an appropriate system or developing a unique internal organizational evaluation system in practice, one should pay special attention to its compliance with other systems of personnel management – motivation, compensation, career planning, vocational training, etc. Such compliance will allow the administration to achieve a synergistic effect as well as to avoid conflicts and contradictions. When determining the methods of personnel evaluation in an educational organization, one should proceed from the

RESUMEN:
Este artículo considera y sistematiza los métodos, tipos, técnicas y formas existentes de análisis y evaluación de personal y presenta recomendaciones sobre su aplicación en la práctica de la gestión del personal en una organización educativa. La información obtenida a través de los procedimientos de evaluación amplía y enriquece de forma cualitativa la base de datos de personal y permite el monitoreo continuo de las condiciones del personal, cuya tarea es brindar a los gerentes acceso rápido a la información y tomar decisiones gerenciales razonables. Con una gran variedad de sistemas de análisis y evaluación de personal, al elegir un sistema apropiado o desarrollar un sistema de evaluación organizacional interno único en la práctica, se debe prestar especial atención a su cumplimiento con otros sistemas de gestión de personal: motivación, Formación profesional, etc. Este cumplimiento permitirá a la administración lograr un efecto sinérgico así como evitar conflictos y contradicciones. Al determinar los métodos de evaluación del personal en una organización educativa, uno debe proceder de los objetivos de esta organización
objectives of this organization and the immediate task of evaluation. The chosen evaluation system should also comply with the culture of an educational organization. The information and methodological base of an educational organization created on the basis of the proposed classification will make it possible to evaluate and analyze not only the professional and competence level of individual employees, structural subdivisions and personnel, but also to conduct a dynamic analysis of the development of the personnel management system in each organization.

**Keywords**: personnel, analysis, evaluation, method, classification, systematization, criterion, educational organization

### 1. Introduction

For a long time, the methods of evaluating and analyzing the activities of personnel in educational organizations remained a formal tool, most often focused on analyzing the employee's compliance with the position held. For personnel analysis and evaluation, a variety of systems, methods, ways and techniques are used that make it possible to take into account the different personal potential of employees and to optimize the relevant costs associated with personnel management.

A comprehensive system approach is the conceptual basis for personnel evaluation in an educational organization. The presence of unrelated evaluation criteria and their varying significance in different situations makes it difficult to give an integrated assessment of labor resources (Bobryshev et al., 2014; Sklyarov et al., 2015).

The management of any object is based on general scientific, traditional and special principles of organization of this process. The fundamental principle of management is systematization. From this perspective, the authors developed a system of methods and ways of personnel evaluation, which can be successfully implemented in the practice of personnel management in an educational organization.

### 2. Methods of Research

The research uses descriptive techniques, a logical and historical approach as well as methods of generalization, classification, comparison, systematization and argumentation. The methodological basis of the study is formed by the main principles of personnel management and a number of research works of domestic and foreign scholars, dedicated to personnel management, the process of personnel planning, analysis and evaluation. The methods, ways and techniques of personnel evaluation considered in this article will allow the personnel of an organization to be analyzed and evaluated by sociological, financial, economic and management criteria and indicators using both traditional and innovative methods. The application of these methods in practice makes it possible to achieve the set goals and to solve pressing problems at all stages of personnel management in an organization.

### 3. Discussion and Results

To date, a significant number of systems and methods for personnel evaluation have been developed, methodically substantiated and applied in domestic and world practice, which can be classified according to various criteria (Huselid, Becker and Beatty, 2005). This classification can be based on various grounds and criteria that help group all the existing methods, ways and techniques of personnel evaluation in the non-material sphere for the purposes of a managerial analysis in accordance with the purposes and directions of this evaluation, the objects of evaluation and the subjects performing the evaluation, the periods of evaluation, the use of the results of evaluation in the process of personnel management in an educational organization.
The effective personnel evaluation plays a huge role in personnel management, being the basis of many procedures that can be used as the basis for classifying the methods of evaluation to justify the following managerial decisions (see Figure 1): recruitment, internal transfers, dismissals, transfers to the composition of reserves for promotion, material and moral stimulation, application of sanctions, retraining and advanced training, personnel control, improvement of the organization of managerial labor, ways and methods of work, improvement of the apparatus structure.

The choice of the methods of personnel analysis and evaluation for each particular educational organization is a unique process. The task of choosing the methods of personnel analysis and evaluation can be solved only by the managing subsystem of the organization itself, within the framework of a managerial analysis. The system of personnel evaluation and analysis should take into account and reflect the following main factors: the strategic goals of an educational organization, the state of its external and internal environment, the structure and organizational culture, the organization's traditions, the categories and characteristics of employees (Kiseleva and Novoselova, 2008).

Each of the personnel evaluation systems used today in a managerial analysis has advantages and disadvantages.

Since personnel evaluation by its nature is multi-purpose, when choosing the methods of personnel evaluation, one should clearly know the purpose of its procedure. It is possible to single out groups of administrative, informational and motivational purposes, according to which this evaluation is carried out. The administrative purpose is achieved through a reasonable administrative decision (promotion or demotion, transfer to another job, referral to training, dismissal) based on the results of personnel evaluation. The informational purpose consists in the fact that both employees and managers have the opportunity to obtain reliable information about the activities. Such information is extremely important for employees in terms of improving their activities and gives managers the opportunity to make the right decision. The motivational purpose lies in the fact that the evaluation itself is the most important means of motivating people's behavior, as far as the adequately estimated labor costs will ensure a further increase in the labor productivity of employees, but only if the labor of a person is evaluated according to his or her expectations (Okhotnikov and Prichina, 2010).
Most often, in practice, personnel evaluation has the following objectives: 1) creation of the information base for decision-making in the field of personnel policy and human resources planning; 2) analysis and evaluation of the performance of employees and their compliance with the position held; 3) justification of decisions in the field of labor remuneration and material stimulation based on the results of work; 4) evaluation of candidates in a competitive selection process; 5) identification of prospective employees for promotion and training; 6) as a means of defining work tasks and responsibilities, etc.

In accordance with the above objectives and stages of the personnel management process, the methods of personnel evaluation can be grouped into two large groups. The first group will include the methods of labor evaluation, the second – personnel evaluation, directly (Mizintseva, 2014).

The systematization of the methods and ways of personnel analysis and evaluation in this case is expedient to be carried out by applying the classification. The classification of personnel evaluation methods can be carried out by the following basic criteria (Figure 2):

- by the subject of evaluation (evaluation of activities by the criteria of complexity, efficiency and quality; goal achievement; qualitative and quantitative result; individual contribution and contribution to the overall results of structural units and the organization as a whole; the employee's personal qualities, the degree of their expression);
- by the source of the data which are the basis of evaluation (documents, reports, interview results, general and special testing data, questionnaires, participation in discussions, etc.);
- by the standards and criteria, according to which personnel evaluation is carried out and the
best or worst indicator is chosen;
- by the level of coverage of the contingent;
- by the period (regularity) of evaluation (regular, periodic and episodic).

In educational organizations, the evaluation of personnel activities is carried out in three directions:
- consideration of labor results (direct evaluation);
- analysis of the employee's business and personal qualities that affect these results (indirect evaluation);
- evaluation of working behavior.

The main advantage of the considered classification is that it not only makes it easy to recognize the affiliation of any method to a particular classification group, but also provides an optimal choice of evaluation methods with regard to the needs and interests of the organization.

Based on the orientation of measurements, evaluation methods can in turn be divided into two groups: of individual and group evaluation (comparative). The first group includes methods which help to evaluate the employee’s performance on an individual basis with regard to the established criteria, standards, goals, etc. The use of comparative methods involves comparing the activities of several employees performing identical or similar work in terms of functional characteristics.

![Diagram of personnel evaluation methods](image)

**Figure 2. Classification of personnel evaluation methods in an educational organization**

In general, personnel evaluation, in accordance with the approaches listed, can be either partial, aimed at evaluating individual activities or elements, or integrated, when both personal
qualities and labor behavior and productivity are immediately evaluated. A different classification can also be used – flow, final, and prospective evaluation. Flow evaluation is used in the current activity process. Final evaluation is based on the results of work for a certain period (academic year, contract term). Prospective evaluation can be conducted to identify the employee’s potential, his or her abilities, value orientations, motivation for the result.

The methods of evaluation also differ depending on the subject conducting the evaluation. The evaluation of work can be done directly by the heads of the evaluated employees, other managers, colleagues, subordinates, specialists of personnel services, external consultants and the subject being evaluating (self-evaluation) (Kamenskaya, 2014). Each of the listed evaluation subjects will use a specific methodological apparatus, and give preference to a certain set of evaluation methods. Here it is necessary to take into account the fact that one can face such a disadvantage as subjectivity.

Modern socio-economic changes have entailed the transformation of personnel evaluation methods. The evolution of the development of evaluation methods related to the search for and the invention of more accurate measurement methods and techniques makes it possible to divide all known methods into traditional ones, applied at the first stages of evaluation development, and modern ones. The use of traditional methods involves a high level of subjectivity in evaluation, and modern methods provide a more objective evaluation of the activities of personnel (Nizhegorodtsev and Reznik, 2014).

The methods of evaluation, in which employees are evaluated by their immediate supervisor, are traditional for most modern organizations. Such methods are effective in large hierarchical organizations, for example, federal universities. At the same time, traditional methods have a number of shortcomings that make them inadequate for modern dynamic organizations operating in a highly competitive environment:

- traditional methods are focused on the individual employee and allow him or her to be evaluated outside the organizational context;
- they are based solely on the evaluation of the employee by the immediate supervisor, and when using them, the opinion of other counterparties of the evaluated employee – colleagues, subordinates, higher-level managers, trainees, parents, employers – is completely ignored;
- they are oriented to the past and do not take into account the long-term prospects for the development of an educational organization and employees.

In the development of more modern non-traditional methods of personnel evaluation, several areas can be identified:

- new evaluation methods consider the working group (division, cyclic commission, parallel, temporary team) as the main organization’s unit as well as emphasize the employees’ evaluation by their colleagues and the ability to work in a group;
- the evaluation of the performance of the individual employee and the working group is carried out with regard to the results of work of the whole organization;
- special attention is paid not so much to the successful fulfillment of today's functions, as to the ability to develop professionally and to master new professions and skills.

The purpose-oriented, planned and current estimates of the majority of scientists and experts conditionally distinguish three groups of methods: qualitative, quantitative and combined.

The group of qualitative methods (also called descriptive) typically includes the methods of biographical description, business characteristics, specific verbal comment, reference, assessment tasks, 360-degree feedback as well as evaluation on the basis of discussion. In other words, these estimates always correspond to a specific set of attributes.

Quantitative methods include all methods with the numerical evaluation of the level of
employees’ qualities (Novoseltseva and Lyubenkova, 2014). Among them the simplest and the most efficient methods are the method of coefficients, the rank method, the method of point scoring, the sample method, and others. Quantitative methods are considered the most objective, since all evaluation results are recorded in numbers. These methods are quite simple and open, they allow almost anyone to calculate “their coefficients” or “points” by their own sufficiently rigorous technique and then evaluate the effectiveness of their work.

Combined methods are a combination of descriptive methods with quantitative aspects. This group includes the widespread and diverse methods of expert evaluation of the frequency of certain qualities, special tests, the method of the amount of estimates, the system of groups and some other combinations of qualitative and quantitative methods.

All of these methods have a significant drawback – they help to effectively evaluate only a certain aspect of a person’s work and his or her social and psychological characteristics. The narrowness of the above methods can be eliminated by a versatile complex method, called the method of evaluation centers. This method incorporates the elements of many methods and allows for a fairly objective analysis of personnel. The method of evaluation centers includes a variety of criteria, by which a person is evaluated. They include the ability to learn and to make generalizations in speech and in writing, in-touch capabilities, perception of the opinions of others, flexibility in behavior, internal standards, creative characteristics, self-evaluation, the need for approval of superiors and colleagues, careerist motives, reality of thoughts, reliability, diversity of interests, stability to stressful situations, energy, good organization, organizational and management skills (Mizintseva, 2014).

For the information, which serves as the basis for the analysis and for making administrative decisions, to be accurate, it is necessary to accurately and objectively identify indicators which should be used for making an evaluation. To do this, one should establish clear and thoughtful personnel evaluation criteria. These criteria can be characterized as both common points, equivalent to all employees of the organization, and specific labor and behavior norms for a particular job or a particular post.

Four main groups of criteria can be distinguished: professional, business, moral, psychological, and purely human (specific) (Kogdenko, 2011). All of these criteria are used in any organization, but with some adjustments.

Professional criteria for personnel evaluation include characteristics of the professional knowledge, skills, professional experience of a person, his or her qualifications, and labor results. The group of business criteria should include responsibility, organization, initiative, and efficiency. Moral and psychological criteria include the ability to self-esteem, honesty, justice, psychological stability. Specific criteria for personnel evaluation are formed on the basis of inherent qualities of a person and characterize his or her state of health, authority, personality.

The process of evaluating the costs and results of labor or the employee’s personal and professional qualities may include both a single criterion and a set of independent criteria, or a composite (complex, integrated) criterion. The practical application of each of the possible criterial approaches has its pros and cons (Lyubenkova and Lyubenkova, 2014).

The application of a single criterion simplifies the evaluation process, however, one characteristic, as a rule, is not enough to implement a full and correct evaluation of the employee’s performance. Therefore, the most appropriate evaluation option would be an evaluation carried out using a set of independent criteria.

The combination of several criteria extends the possibilities of evaluation, but it has its limits. In particular, evaluation by independent criteria does not allow employees to be compared for making decisions on promotion, rewards, etc.

An integrated (composite) criterion can be obtained by weighing and summing (or multiplying) individual independent subcriteria and completely eliminates the said deficiency. The share of subcriteria can be equal or different, based on their importance. The importance and significance of subcriteria can be carried out with the help of expert evaluation and the methods
of factor and correlation-regression analysis. The quantitative measurement of subcriteria can be expressed by natural units, scores or coefficients, which makes it possible to formalize, parameterize and evaluate any qualitative characteristics of the evaluation object, having even no natural meters. The scoring measurement of subcriteria is made in accordance with a pre-established scale, the gradation of which can be uniform for all subcriteria or different for each of them. The use of coefficients implies a comparison of the actual value of the subcriterion with a specified standard (planned) level.

The use of the composite criterion and the possibility of employees’ ranking with its use also has a certain drawback. The composite criterion expressed by the sum of points or a single coefficient masks the strengths and weaknesses of employees’ activities, while a non-optimal set of subcriteria or errors in the definition of their importance (share) distort the accuracy of measurements. Despite these difficulties, the benefits of using the integrated criterion for evaluating the activity of all the categories of employees of educational organizations far exceed the disadvantages described, which explains the need for its broad application in evaluation techniques.

Evaluation methods grounded on the competence-based model, which are actual to date in the field of human resource management, can be successfully applied in the evaluation of professional and personal qualities of the teacher.

Professional competence is commonly understood as the ability to act effectively in solving professional problems based on practical experience, skills and knowledge. The competence-based model includes a set of core competences that are necessary for the teacher to conduct successful professional activities: training, education and development.

The evaluation of the teacher grounded on the competence-based models is possible both at the stage of recruitment in an educational organization and in evaluating teaching personnel in the organization. At the same time, this model makes it possible, along with the evaluation of the teacher’s compliance with the position held, to determine his or her potential, which may be generated for the further accomplishment of high professional results, achieving an optimal solution to improve the quality of the educational process.

The method of evaluating the employee’s competences involves a step-by-step solution of a number of tasks.

When developing the model of competences for the teacher, it is important to take into account his or her intellectual and professional qualities, skills for implementing developmental activities, possession of psychological and pedagogical technologies, etc. For the model of competences to work effectively, it must correspond to its goals and objectives and be used for its intended purpose (Tomilina, Glotova and Kuzmenko, 2013).

It is possible to use several methods of competence assessment: assessment center, case-testing, interviews, professional tests-questionnaires, etc (Bukhalkov, 2009). In our opinion, the teacher’s competence can be most fully evaluated by the assessment center. This method of integrated evaluation is based on the use of complementary methods and is aimed at assessing the real qualities of employees, their professional and psychological abilities, as well as identifying potential qualities.

When evaluating the professional competence of the teacher, it is important to provide feedback to the consumers of his or her main activity (students and their parents). In this case, the assessment center method makes it possible to involve not only authoritative teachers of an educational organization itself, but also executive authorities in the field of education management, supervisory bodies, and public organizations representing the interests of consumers (Litvin et al., 2015).

The main task in conducting the evaluation procedures is to develop a pre-agreed model of competences as well as standardized test conditions for each employee. Thus, for each participant, based on the discussion, the level of a certain competence for which the evaluation is conducted is determined (Bobryshev et al., 2015).
In view of the evaluation results, a report is drawn up on the basis of competences, which contains conclusions on the level of competence of each participant. The results can be presented in the form of tables, diagrams, scoring. Individual results of evaluating the teacher's competences will not only make it possible to determine the professional level, but also will give an opportunity to identify his or her strengths and weaknesses as well as to give guidance and recommendations for further self-development (Volkov, 2011).

The efficiency of the measures to evaluate the teacher's competences depends largely on the choice of the model of competences. For this model to work effectively, it is important that it is in line with the goals and objectives set (Taranova et al., 2015). A unified model of competences will not only make it possible to formulate a clear representation of the pedagogical staff of an educational organization about the real requirements for their core activities, but will give a clear idea of what qualities and professional skills affect their future.

The effective model of the teacher's competences should be clear for understanding, have a simple structure, and meet the requirements of professional activity, taking into account its specificity (Bludova, 2012).

The modules of professional competences can be detailed and presented with appropriate parameters, and a list of them can also be supplemented or modified in order to obtain an objective specific evaluation. Criteria for the efficiency of the competence-based model depend on many factors, both endogenous and exogenous, but the main parameters can be formulated as follows:

- a list of competences should ensure all aspects of the teacher's professional activity;
- a certain activity should include a separate competence;
- each competence must be clearly defined, developed and accessibly formulated;
- the competence should support and strengthen the basic purposes of an educational organization;
- the model of competences should be modern, flexible, and reflect the present and future vision of professional pedagogical activities.

To evaluate the compliance of the teacher's competences with the strategic goals of reforming the educational system, it is possible to propose the enlarged modules of professional competences based on the teacher's standard, proposed for public discussion on February 15, 2013 by the Ministry of Education and Science of the Russian Federation. This project sets out the requirements for the teacher's professional activity. By choosing 10-12 most important competences for each educational organization, one can build a model of the teacher's competences, taking into account the specifics of professional activity (Bobryshev, Golchenko and Kazakov, 2014).

An example of the diagram demonstrating the competence field of an individual teacher is given in Figure 3. Proceeding from the presented results, it is clearly visible at what level of development this or that competence is, and what competences of a given teacher require further development and improvement.
The competence-based approach as an evaluation tool can give a clear definition of the professional and personal qualities required for the teacher depending on the specifics of his or her activities. The information on the level of teachers’ development will allow the potential of the entire educational organization to be evaluated, and will make it possible to draw up a development plan for each teacher that can include recommendations not only for the teacher, but also for the supervisor.

4. Conclusion

In spite of the fact that there are a variety of different approaches to personnel analysis and evaluation, one should note their general problem – subjectivity, i.e. the decision taken depends largely on who exactly uses this method or on the personality of the expert involved. Therefore, the expert’s professionalism and experience is of great importance here, since the fulfillment of a given task, in addition to the corresponding personal qualities, requires knowledge and competence in the field of psychology as well as understanding of the educational process, goals and specifics of the activity of a particular educational organization. Therefore, when creating and operating the system of personnel analysis and evaluation in an educational organization, the following conditions and requirements must be observed: objectivity, reliability, reliability, forecastability, complexity, wide availability of analysis techniques and evaluation criteria. The implementation of evaluation activities should be seamlessly integrated into the overall system of personnel work within the organization as well as contribute to its development and improvement.

A competently conducted evaluation is an effective tool to identify the weak and strong aspects of employees’ activities and to draw up a plan for their professional development, which ultimately leads to the improvement of the educational process and the work of an educational organization as a whole.

Trying to adapt to modern realities, managers are striving to create within their organizations comprehensive systems of personnel evaluation, which would include a sufficiently large
number of techniques to minimize errors arising in the evaluation process. In our opinion, when evaluating personnel, first of all, one should not only collect several methods together, but adapt them to the conditions existing in the organization, and often – when it comes to foreign methods – to the conditions of Russian reality.

Thus, the proposed method of personnel evaluation will make it possible to analyze and evaluate the organization's personnel by sociological, financial, economic and management criteria and indicators, using both traditional and innovative techniques. This in turn will help to evaluate and analyze not only the professional and competence level of individual workers, departments and organizations groups, but also to conduct a dynamic analysis of the development of the personnel management system in every organization.

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