The personnel competence qualification formation in the agro-industrial complex production systems: managerial aspect

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Abstract. The employee’s labor potential is not a constant value; it is permanently changing. Human performance and employee’s creativity are accumulated in the course of employment, they increase in the course of knowledge and skills development and improve due to work and life conditions changes. The formation of the competence approach is generalized. The role of the labor categories “competency” and “competence qualification” of personnel in the application of professional standards in the agro-industrial complex production systems functioning is clarified. The analysis of requirements to the employee’s labor functions is given. Professional standards are important for the education sector as a basis for the formation of federal state educational standards and educational programs at all levels of professional education, the development of methodological materials and the choice of training forms and methods in the professional education system. The use of personnel competent qualification in the development of agricultural production systems is directly related to changes in the labor nature and content, availability of vocational training and education. The conclusion requiring the employer to conduct employees’ retraining is made, as it is a condition of implementation of core activities and expansion of the organization innovative receptivity. Based on this, the personnel competence qualification is considered to be the main category in personnel management. The research results generalize the conclusion about the development of production systems based on quality management system, taking into account the expenses for personnel – training of organization’s key employees at the employer’s expense.

1. Introduction

The processes of globalization and the modern scientific and technical platform cause systemic transformations, both in the direction of the labor resources use and the need to optimize the labor content and nature. The scientific and technological progress, the development of technologies as well as the labor market changes require constant development of employees’ professional skills and competencies. Satisfaction of the need for personnel for the agricultural business production systems is associated by the authors with the formation of the personnel competencies in the educational environment that meet the modern production needs.

The employee’s labor potential is not a constant value; it is permanently transforming. Human performance and employee’s creativity are accumulated in the course of employment, they increase in the course of knowledge and skills development and improve due to work and life conditions changes. Therefore, characterizing the labor potential of the individual, it is necessary to take into account that it accumulates various cause-and-effect relationships acting in the unity of spatial and temporal
characteristics [1]. The labor potential of the employee’s personality is the initial structure-forming item and forms the basis and content of labor potentials of the higher-order systems – organizations, regions, countries.

Nowadays, the search for tools based on the personnel competence qualification which allow to effectively manage the organizational behavior of employees and provide competitive advantages of agribusiness systems, is the key to both innovative receptivity increase and the basis for the personnel professional development. Scientific and practical recommendations on labor potential management are presented in the works of domestic scientists: Yu.G. Odegov, E.A. Mitrofanova, D.K. Zakharov, N.A. Volgin, B.M. Genkin, P.V. Zhuravleva, A.Ya. Kibanov, O. L. Chulanova and others. The basis of our research on the development of the organization labor potential was founded on the educational system industrial specificity its impact on the competencies formation of production systems employees.

2. Main part
The competence approach provides for the development of the individual taking into account as well as in the conditions of civilization global risks – social challenges of globalization, which create a danger for all mankind. The content of this approach lies in the perception of risks not as insurmountable manifestations, but as the imperatives for constructive competent activity [2]. This approach in working with personnel is quite new for domestic practice, as well as the concept of “competency”, “competence qualification”. Traditionally, the category of “professionally important qualities” was used as a characteristic of the employee’s specificity, primarily psychophysiological, contributing to his professional success. With regard to professional activities in the field of management, the assessment of employees is still carried out on the basis of the qualification method, based on unified systems of position classification, taking into account the traditional combination of knowledge, skills and abilities.

The competence approach is introduced into the professional education system (for example, competencies are provided by the federal state educational standards of higher professional education of the third generation), which emphasizes the importance of its detailed study. The experience of using the competency assessment method, accumulated since 1991, has allowed to form a worldwide database of competency models and a common vocabulary of competencies, a scale of competencies, to conduct cross-cultural comparisons and to obtain new data on the role of motivation in assessing the performance level. The ongoing changes in the development of organizations convincingly prove that modern specialists should have greater opportunities and resources for innovative receptivity of the organizational system [3, 4]. Certainly, production tasks are not constantly recurring, but they can be generalized, systematized and, as a result, reduced to a specific set of repetitive technologies, algorithms or strategies.

A number of scientists [5 - 7] define the competence approach from the position of the personnel self-training for the effective use of competencies throughout life, supplementing them with the life experience. Undoubtedly, the competence approach has an innovative orientation. However, it can act, on the one hand, as an argument in favor of the competence approach, and on the other, as a serious source of risk by adapting the general competence models to the needs of specific organizations, [6, 8, 9]. We have clarified and presented the generalization of the essential concept “competency” in table 1.

| The essence of the concept (“competency” is) | Authors |
|-------------------------------------------|---------|
| A rational combination of knowledge, abilities, considered in a short period of time, possessed by employees of the organization. | Kibanov A. Ya. [9] |
| A set of actively used knowledge, skills, as well as professionally important qualities of the individual, necessary for an employee to | Odegov Yu. G. 6] |
effectively perform a certain job.

Unity of knowledge, professional experience, abilities to act and skills of behavior of the individual defined by the purpose, situation and position.  

The system of interrelated elements: the employee’s personal qualification, the authority delegated to him by the owner of capital in the form of the right to use the resources necessary for the function performance.

The set of professional knowledge and skills, as well as ways to perform professional activities.

Individual characteristics of the degree of compliance with the professional requirements.

The ability to implement practical activities that require a conceptual system and understanding, the appropriate type of thinking that allows to quickly solve problems and tasks.

The competency is understood by the authors as social and labor characteristics of the set of knowledge, skills, professionally important qualities and motivational characteristics of the employee, necessary to meet the needs of the organization in accordance with its development strategy. The competency is a characteristic of potential quality, and is an element of personnel readiness for effective work in the definite conditions in the labor team.

The competency is always specific, and we associate its changes with changes in the level of the organization functioning:

- The qualification requirements in accordance with the quality management system;
- The mastering degree of knowledge, skills and abilities in the conditions of the educational system transformation;
- The range of competencies to meet personnel needs and achieve strategic goals.

The process of transformation and development of employee’s competence is reflected in the innovative receptivity of the organization. Based on this, it is advisable to consider competency as the main category of the competence approach, both in personnel management and in professional education.

![Diagram](image_url)

**Figure 1.** Levels of employee’s competence qualification formation.

Competence qualification is an integral and a broader concept. In this concept, one can observe the presence of a certain amount of the competencies in the employee that ensure the solution of system
tasks assigned to the staff. Competence qualification is the employee’s dynamic quality which develops from the set of the initial level professional qualities received in the higher education system, to the highest form of competence qualification, that is mastery, talent, the employee’s recognition in the labor duties performance (figure 1).

The success of professional activity depends on the ability to maintain the achieved level, as well as to add new qualitative competence components to it, both the employee’s professional development and the increase in the duration of the labor force properties use in the labor market. It is important to note that from the position of public interests’ satisfaction, educational institutions, including those engaged in training of specialists in the agricultural field, should first of all assess the quality of their educational services in accordance with the requirements established by the state control authorities. The main procedure of the educational services quality assessment developed in Russia is the state accreditation of educational institutions [10]. Leading foreign and domestic scientists in the field of competence research have identified the importance of the ability to correctly assess not only the choice of competencies required by employees of certain professions, but they have integrated the concept of the competency into the definition of “labor potential”, which allowed the employer to determine the optimal labor methods (action, operations) in a particular workplace.

Improving the effectiveness of educational activities requires the use of more effective pedagogical technologies. Existing approaches to assessing the educational programs effectiveness can be grouped in different ways: effectiveness indicators and performance indicators. Both groups of indicators contain both particular and general indicators. Within the framework of additional professional education, a special place among innovative pedagogical technologies is occupied by the modular training, as the most mobile, flexible and dynamic technology, and especially relevant in the rapidly changing needs of the labor market.

Professional standards are the main element of the national system of professional qualifications, which reflect the current qualification requirements. The description of skills, abilities, knowledge is given in specific labor functions of the professional standard, ranked by skill levels depending on the complexity and responsibility of the work performed. As a document, it is a description of labor functions for a certain type of activity, as well as requirements for knowledge, skills and experience of specialists performing these functions [11]. According to the Labor Code of the Russian Federation (Article 195.1) Professional standards are the characteristics of the qualification required by an employee to perform a certain type of professional activity, including the performance of a certain labor function. In other words, “professional standard” describes the requirements for the employee’s qualification, which he must meet when performing a particular job [12].

The professional standard is mandatory for employees as it is the basis of social and labor activity for them:

- formation of personal professional level and directions of training;
- effective application of employee’s competencies at the enterprise;
- insurance of the quality growth dynamics (master, innovator), demand in the labor market, reduction of the time to find a suitable job;
- improvement of the working life quality.

Professional standards are important for the education sector as a basis for the formation of federal state educational standards and educational programs at all levels of professional education, the development of methodological materials and the choice of forms and methods of training in the professional education system [13]. At the same time, it should be noted that unified ordered catalogues of requirements to employees have not been formed yet. In practice, these requirements are formed depending on the specificity of the organization, national characteristics, and subjective opinion of researchers. For example, Government Resolution № 506-p of 30.09.2013 (Annex № 9, Subprogram “Personnel support of agro-industrial complex”) contains measures for state support of expenses to agricultural producers on training of workers and employees [14].
Professional standards allow to monitor the professionalism of employees, to maintain and improve quality standards for a particular area of activity. The professional standards use has obvious advantages for employees, employers, educational institutions and educational authorities, as it is professional standards that determine the necessary competencies.

When forming and implementing personnel policy and organizing employees’ training the Ministry of Labor of Russia recommended to public authorities, employers and other interested organizations to use the directory of demanded in the labor market, new and promising professions, including those requiring secondary professional education. The comparative characteristic of the professional standards and the existing normative-legal acts establishing requirements to the employee’s qualification and labor functions is presented in table 2.

Table 2. Comparative requirements to the employee’s labor function.

| Compared parameters | Professional standard | Unified qualification directory, Unified tariff and qualification directory |
|---------------------|-----------------------|-------------------------------------------------------------------------|
| Conceptual apparatus | The legal definition of professional standard and qualification is given (Article 195.1 of the Labor Code of the Russian Federation, Article 2 of the Federal Law of 29.12.2012 “273-r” “On education in the Russian Federation”) | It does not contain specific definitions |
| Adoption procedure  | Multi-stage procedure involving employers, professional communities, trade unions | There are no special requirements |
| Content             | A wider range of requirements for the work function depending on the level of qualification and performed economic activity | Three sections of the requirements: “Job descriptions”, “Qualifications requirements” and “Knowledge requirements” are included |
| Implementation obligation | It does not fall under the Federal law of 27.12.2002 No. 184-FL “On technical regulation” | It has the recommended character in terms of qualification requirements and labor function |

The effect of professional standards in terms of qualification requirements (level of knowledge, skills, professional skills and work experience) is applied to employees of all organizations, regardless of their organizational and legal form and form of ownership. This is due to the provisions of Article 195.3 of the Labor Code of the Russian Federation, which establishes the procedure for the application of professional standards. It states that if the Labor Code of the Russian Federation, other federal laws, other regulatory legal acts of the Russian Federation establish requirements for the qualification required for an employee to perform a certain labor function, the professional standards in terms of these requirements are mandatory for employers. In other words, mandatory application of professional standards and qualification requirements, in such cases, is established for all employers, without giving details on the legal form, number of employees etc. [12, 14]. Qualification directories are gradually replenished with new professions. This explains the reason for the current qualification system change, even, the replacement of the Unified tariff qualification directory of works and occupations of workers (UTQD) and the Uniform qualifying directory of positions of heads, experts and employees (UQD) by the professional standard system.

The need for personnel professional training and retraining for own needs is determined by the employer. The employer carries out professional training, retraining, advanced training of workers,
training in their second professions in the organization, and if necessary – in educational institutions of secondary, higher and additional education on the terms and in the order which are defined by the collective contract, agreements, the employment contract (parts 1 and 2 of Article 196 (Labor Code of the Russian Federation)) [12]. In cases stipulated by federal laws and other regulatory legal acts, the employer is obliged to carry out advanced training of employees, if this is a condition for the performance of certain types of activities by employees. The system of improving the professional competence qualification of employees is presented in figure 2.

![Figure 2. System of professional competence qualification improvement in the labor market conditions.](image)

The basis of the personnel training is the monitoring assessment of personal characteristics, functional structure of activities, the object of labor functions application. Subject-professional retraining is associated with the deepening, improvement and updating of knowledge and skills on the subject of activity.

The process of the labor potential development of the key personnel in the organization is in constant motion. In this regard, the issue of improving the management technology of the teachers’ labor potential development in order to systematically increase the employees’ labor potential in the organization for the acquisition of necessary and timely skills in professional activities seems to be relevant.

**Table 3.** Management efficiency of the labor potential development in the organization.

| Activity | Implementation conditions | Efficiency of the organization functioning |
|----------|---------------------------|--------------------------------------------|
| Advanced training of employees at the employer’s expense | The competence qualification increase on the basis of various educational programs | Expansion of activities (specialization); Increased productivity; Creation of innovative products. |
| Control over the competencies formation | Training quality: -frontal; - subgroup; - individual. | Improving the quality of work /products; Expansion of production activities; The increase in wages; Reducing the payback period for personnel development costs. |

The basic measures to manage the labor potential development of the key personnel in the organization consist in improving employees’ skills and certification passing. The quality management
system of the organization is a general guide for the quality of the educational process in the organization. Development of the personnel labor potential in the organizations, in our opinion, should be included into the expenses for professional development of the key employees at the expense of the employer. According to Article 187 of the Labor Code of the Russian Federation when the employer sends an employee to professional training or additional vocational education with a separation from work, the employer retains the place of work (position) and the average salary at the main place of work. The employees, who are sent to professional development courses, receive travel expenses payment in the order and the sizes which are provided for the people sent to official business trips. The fare to the place of study and back, accommodation and subsistence expenses in accordance with established standards for travel expenses are made in accordance with applicable law by the organization that sent the employees to study. Thus, the employer is obliged to choose and pay for the services of the institution where his employees receive additional professional education.

References
[1] Ivanov N A 2011 Labor potential of the employee (Saratov: SSU Publishing house) p 122
[2] Alaverdov A R 2012 Development of human capital of the organization: Management of human resources of the organization (Moscow: Moscow financial and industrial University “Synergy”) pp 509-60
[3] Antonova N V and Litvinova V S 2019 Formation of personnel management strategy of the Institute of international management and education Azimut of scientific research: economics and management Vol 8 2 (27) 47-9
[4] Frolova O Ya and Budushevskaya A V 2016 The importance of human resources process planning in the organization management system Socio-economic journal (Krasnoyarsk SAU) 4 103-15
[5] Basinskaya I V 2013 Competence approach in human resources management Humanitarian and economic Bulletin 3 81-7
[6] Chulanova O L 2013 Socio-economic content of the concepts “competency” and “competence qualification” University Bulletin of State University of management 18 174-9
[7] Chulanova O L 2012 Evolution of development of competence approach in personnel management Modern problems of social and economic management 5 192-206
[8] Belova O L 2010 Qualification characteristics and competency model: is it possible to put an equal sign? Personnel Officer. Personnel records management 1 10-5
[9] Kibanov A Ya 2011 Personnel Management: competitiveness of university graduates in the labor market (Moscow: INFRA-M) p 229
[10] Federal law of 29.12.2012 N 273-FL “On education in Russian Federation”
[11] Bazarnaya G A 2017 Professional standards: purpose, approaches to implementation in practice: method, recommendations (Amur.region sci. library named after N N Muraviev-Amursky – Blagoveshchensk) p 28
[12] The Labor Code of the Russian Federation of 30.12.2001 N 197-FL
[13] Letyagina E N 2015 Use of professional standards in the educational process: Educational and methodical manual (Nizhny Novgorod: Nizhny Novgorod state University) p 56
[14] Fomina LV and Shmeleva Zh N 2019 Practical experience of training specialists in personnel management at the Krasnoyarsk state agrarian university Azimuth of Scientific Research: Economics and Management 8 (1) 365-9