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Conceptual problems of contemporary additional education in the agro-industrial complex: employers' personnel strategies

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Abstract. The paper critically reviews the conceptual approaches existing in contemporary additional education in the agro-industrial complex. In particular, employer's personal strategies are discussed in current conditions.

The thesis about the importance of developing support systems for “continuing education” is associated not only with the satisfaction of the educational and professional needs of a person himself, but also with the mechanisms for the formation of new sectors of the economy. The changing conditions of professional activity require the individualization of profiles of professional development and flexibility of qualifications frameworks, giving rise to the task of updating the system of continuing professional education as one of the key areas for the development of “continuing education”. The paramount importance of additional professional education is enshrined in a number of strategic documents, including priority projects in the field of education and the program “Digital Economy of the Russian Federation.”

With the continuing growth in the coverage of additional professional education and Russia's leadership among the G20 countries in terms of the population proportion in the age cohort of 25-64 years with tertiary education (about 59% and 27%, respectively), less than half of working Russians within five years are included in additional vocational education (Figure 2).

At the present stage of development, Russia has achieved serious results in the production of agricultural products and foodstuffs. Investment in agriculture has stimulated double the production growth since 2000. Russia is steadily increasing food supplies to the world market. Over the past 17 years, exports of agricultural products and foodstuffs have grown by a factor of 16, reaching 20.7 billion USD. Even 20 years ago, Russia was an importer, and now it collects a record grain harvest for the fifth year in a row.

Russian agriculture has become a modern and competitive industry that has a steady pace of development, being a real driver of economic growth. To secure a steady pace of development, as well as to modernize the industry, an appropriate staff is required. However, despite the dynamic development of the agro-industrial sector in Russia since 2005, employment in this sector has decreased by 1 million people. There are several reasons for this, including low wages, lack of conditions in the countryside, and lack of prestige of professions. According to HeadHunter, the



average salary of a manager in agriculture in Russia is at least 40 thousand rubles, but in order to become a potentially successful candidate for a managerial position in the agro-industrial complex, one needs to have experience in a profile for at least 6 years. This requirement is made by employers to 74% of vacancies for managerial positions. Higher special education is also needed: in 68% of open vacancies, a wish is expressed to see candidates with a diploma from the Russian State Agrarian University – Moscow Timiryazev Agricultural Academy. Knowledge of foreign languages is usually singled out as a separate summary requirement, most often English [3].

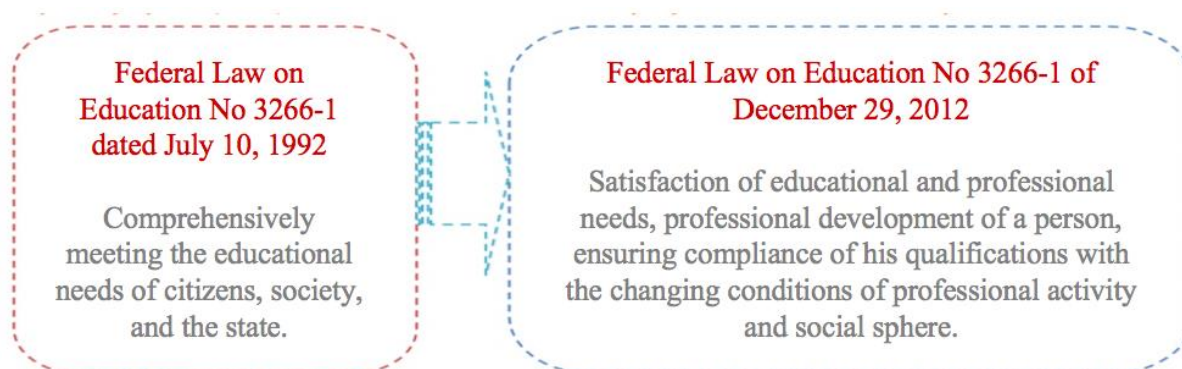


Figure 1. Transformation of the goal of vocational education.

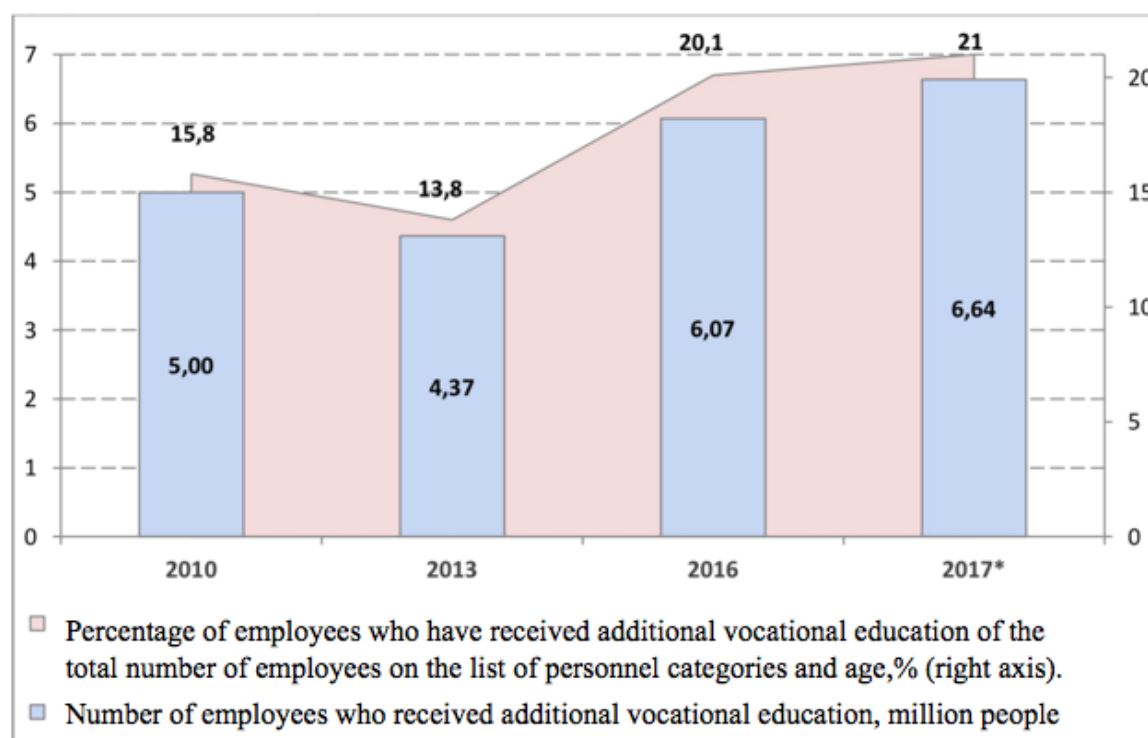


Figure 2. The change in the number of employees who have received additional vocational education from 2010-2017 [4].

Automation of production in agriculture requires the development of new professional competencies and requirements for agricultural workers. Those employed in modern agriculture should have knowledge in the field of robotics and software as well.

To bring the agro-industrial complex to the appropriate level of competition with other industries that are traditionally high-tech, we need appropriate technologies and people who use these technologies in their daily working practice.

In this regard, not only at the state level, creating impulses for the development of the industry, but also from the agro-industrial sector enterprises, it is necessary to set conceptually new tasks, the solution of which would help not only to create high-tech workplaces, but also facilitate the training of personnel already working in the industry.

One of the pioneers in the development of a conceptual framework for staff training is the agro-industrial holding “Miratorg”. This enterprise has one of the fastest growing products on the market of the agroindustrial complex and is unique in terms of its vertical integration – production is carried out according to the principle “from field to counter”.

In connection with the constant introduction of innovative solutions, technologies and expansion of production capacities, the holding provides training to personnel on a regular basis. In 2017, thanks to the implementation of goals to increase the efficiency of existing production and the launch of new production lines, where absolutely new meat products were presented, the volume of beef produced by “Miratorg” increased by 32% to 82 thousand tons. At the end of 2017, the holding retained its unconditional leadership in the direction of beef cattle in Russia.

To solve the shortage of personnel, it was decided to create a new personnel strategy (see Figure 3).

According to the personnel strategy, “Miratorg”, as the largest employer in the regions of presence, created its own training center called the “Meat Business Academy”, specialists of which not only study the needs of the holding for the future, but also the possibilities of regional labor markets to satisfy them. Teachers of the Academy provide training and retraining of specialists necessary for the holding.

The training center has developed APE programs, which are implemented in various forms, depending on what tasks are defined to solve.

Thus, when implementing the project for the construction of the Miratorg Veterinary and Sanitary Utilization Plant in 2017-2018, specialists with unique knowledge were required; they had the opportunity to master this large-scale idea. For their training, a personnel growth strategy was introduced, which, as an employer, allowed “Miratorg” not only to create a demand for highly qualified specialists in the regional market, but also to attract international consultants in the field of modern recycling technologies to the task.

As a result of the launch of the project, it was possible to adjust the functioning of modern lines, which make it possible to obtain as a result of recycling the products subsequently used in the production of animal feed (see Figure 4).

Thus, from January to September 2018, the company produced more than 3.9 thousand tons of meat and bone meal and 1.9 thousand tons of feed fat, which is 38% and 27%, respectively, more than in the same period of 2017. The increase in production volumes is due to the increasing capacity of the pig-breeding division and the increase in processing depth. The Veterinary and Sanitary Utilization Plant of the agroholding “Miratorg” produced 5.8 thousand tons of products, processing more than 16 thousand tons of raw materials in the first three quarters of 2018.

To organize the work of the integrated high-tech precision farming system, which includes GPS technology, geographical information systems (GIS), and an agricultural holding, a team of specialists who underwent advanced training under advanced training programs within the corporate training center was created. In a short time, specialists were trained who became employees of the precision farming department. The division conducts regular monitoring of soil conditions. On the basis of the obtained data, the required doses of mineral and organic fertilizers are calculated, the seeding rates of tilled crops are adjusted depending on the zonality of the fertility of the fields, maps of the optimal direction of movement of the units along the fields are developed to reduce soil compaction, studies are conducted on the duration of amelioration and organic fertilizers on fertility. All necessary research is carried out in its own soil laboratory in Ivna, Russia. Here they also check the content in the soil of micro and macro elements necessary for obtaining a good harvest.

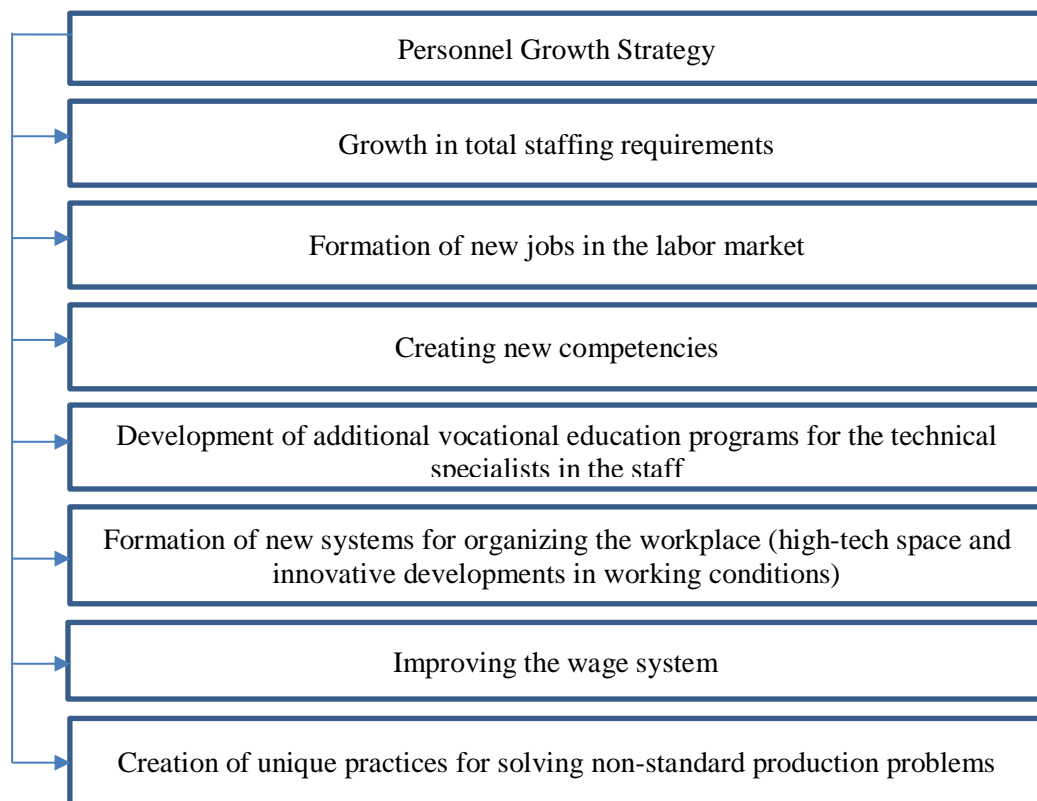


Figure 3. The HR strategy of the agro-industrial holding “Miratorg” as the largest employer and tax payer.

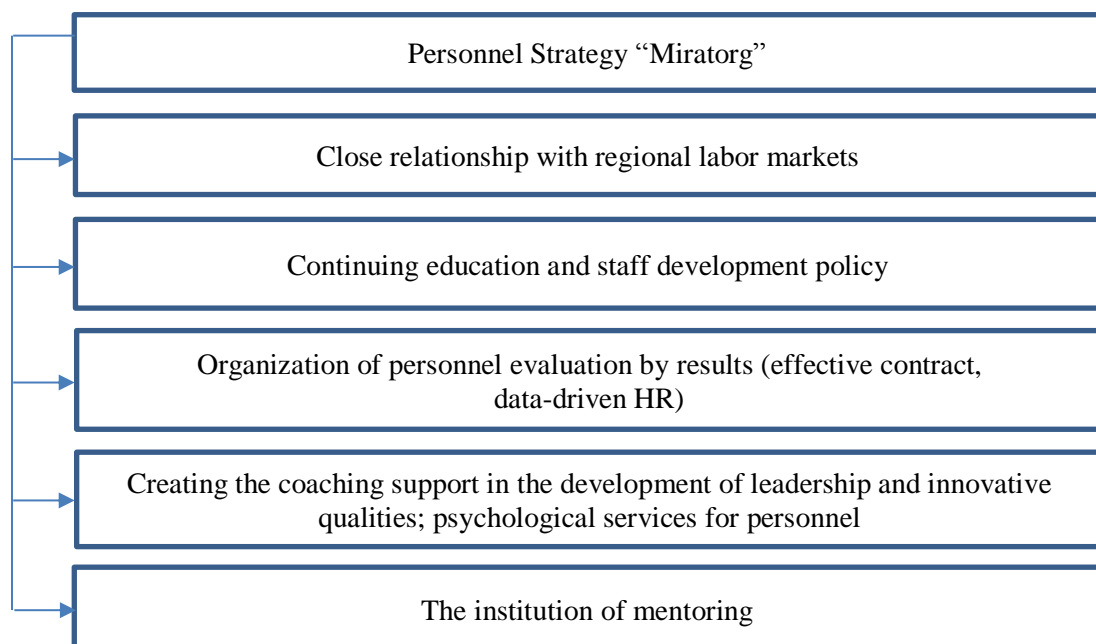


Figure 4. The personnel growth strategy used in the implementation of the project for the construction of the Veterinary and Sanitary Utilization Plant of the Miratorg company-employer.

The consequences of a “smart” approach to farming were identified as a result of a study conducted by the “Center of Agrochemical Service Belgorodsky” (an independent state laboratory) in the fields

of the Ivnyansky subdivision of the agroholding. The analysis showed an increase in the phosphorus content by 64% and potassium by 55%. This is one of the most important trace elements necessary for the successful growth and development of plants.

Efficiency, coherence of processes, timely retraining of specialists and cost reduction are one of the main tenets of the work conducted by the agricultural holding. The operation of the equipment in the fields allows one to track the program of satellite monitoring of transport. The agronomist no longer needs to go into the field every time to monitor the work of employees: on a tablet or smartphone using software, one can track where the equipment works, the used level of fuel, how much space has been processed and how much is left to process, the reason for possible downtime and other important indicators.

The Miratorg Academy Training and Technical Center is located in close proximity to the production base. The infrastructure of the facility includes: a residential building for students and teachers, classrooms, a garage, an overpass, and a training ground for driving skills. Today, on the basis of the Academy, specialists in agronomy, engineering, and technical services from Bryansk, Smolensk, Tula, and Kaluga are trained. Training includes techniques and methods of working with modern agricultural equipment, as well as the basics of managing the quality of feed production and the introduction of precision farming systems. According to the concept of staff development, the training center is designed to train more than a thousand specialists annually.

With the end of the agrarian season, the schedule of staff development begins annually. Each employee must improve their qualifications at least once a year. Experienced employees undergo recertification, and their trainings are held with the involvement of world leaders-suppliers of seeds and equipment. Within the framework of the program, it is necessary to submit a project to protection, which proves the necessity of applying certain foreign or domestic experience and technologies in production. Each student is given the opportunity to test their results.

According to the concept of staff development, all new employees are also required to undergo training. Regardless of previous experience, those who want to get a job in a holding attend theoretical and practical classes of experienced teachers and trainers, thoroughly study production processes, then practice on advanced farms and only after that start independent work.

It should be noted that the holding is actively working with regional authorities in order to achieve the goals of national projects, outlined in the May Decree of the President of the Russian Federation [1]. In particular, the Miratorg leadership is considering the idea of entering international markets and in this regard intends to improve the concept of staff training and retraining and further. Thus, further participation of the enterprise in regional development is planned - through expansion of activities in the regions of presence, which could not only solve employment problem but also contribute to changes in social indicators related to the qualifications of the regional workforce. Managers of the agroholding plans to attract the best specialists in the field of agriculture to develop new programs of additional professional education and to form a strategic program for the further development of the training center, taking into account the new tasks of modernizing the Russian economy. So, if at present, training is held in 25 disciplines, then in a year there will be 250 of them. Over two thousand people will be able to gain knowledge and qualification every year. In the near future, the construction of the second stage of the training center is planned for the employees working in the engineering and agronomic service. Currently, the company employs more than four thousand people, and in the next two to three years, this figure will increase to eight or nine thousand. Therefore, the issues of additional training and competence of personnel become crucial.

The development of human capital has a key role in ensuring the sustainable growth of the Rusagro group of companies. To achieve this goal, the following activities are being implemented:

- Conducting a comprehensive assessment of personnel in order to identify the deficit in qualifications and competencies, develop individual development plans, improve the quality of human resources and their effectiveness;

- Conducting a regular assessment of the results of human capital development according to two main parameters: an index of staff quality and efficiency, analyzed on the basis of its performance, and a level of involvement;
- Early formation of a personnel reserve of young professionals through cooperation with leading regional universities and colleges, as well as through internal training systems and the creation of a strong employer brand;
- Automation of HR processes.

Group employees have many advanced training opportunities. Every year, the group's business lines develop and implement personnel plans for training and developing employees based on the strategic and current business objectives, as well as the needs identified through a comprehensive assessment.

Following the results of a comprehensive assessment (which is filled out by each employee), for a period of 1–2 years, an individual development plan, where he records all the training and development activities designed to improve his qualifications of the employee or ensure the transfer of his accumulated knowledge.

The current system of training and development in Rusagro suggests the following ratio of methods: 70% of training and development takes place in the workplace by solving new problems; 20% is due to the transfer of experience (mentoring) and the development of others; and 10% is with the help of external trainers and consultants or attending external training events (trainings, seminars, conferences, etc.) [2].

The staff development concept of the Rusagro group of companies provides for advanced training in a form that is aimed at the fullest professional support of the company's employees in the training process. In addition to specialists conducting classes in the framework of additional professional education programs, psychologists and professionals in the field of motivation are involved in this project. Their task is to create the desire of employees to develop new technologies, to acquire knowledge, allowing not only to expand their horizons in their specialty but also to develop personal qualities.

An integrated approach to the problem of staff development is also characteristic of other companies, which in different ways represent the organization of additional professional education and use different methodologies in the field of professional development (see Table 1)

Table 1

Company name, characteristic	The purpose of corporate personnel strategy	Form of organization of additional professional education	Features of the implementation of programs
The meat processing industry of the "Talina" Group is represented by three sites of LLC "MPC Atyashevsky" in the Republic of Mordovia. The meat produced at the holding's pig farms is processed at the production of LLC "MPC Atyashevsky" in the village of Atyashevo. Two more production sites are located in the city of Saransk and the	The need to train animal care operators and veterinarians in new technologies of industrial pig breeding, including artificial insemination	Training center for pig breeding to improve the skills of workers, specialists, top managers, etc. The center carries out its work on the basis of the Agrarian Institute of Mordovia State University. Not only employees of the company, but	For young professionals who have just graduated from an institution, have been organized workshops, during which the project is protected. Each new employee is assigned a mentor who oversees the

<p>village of Torbeevo. Today, at the Torbeev site, there are workshops equipped with modern lines of continuous action for the production of sausages, from the preparation of minced meat to the manufacture of finished products, their packaging and delivery to the warehouse. The production capacity of the reconstructed plant is 160 thousand tons of sausage products per year. Implementation of the project on modernization and increase of meat processing facilities. The reconstruction of capacities in Atyashevo is proceeding at an active pace. The existing production is being expanded in Torbeevo, a raw material preparation shop is being built, a refrigerator is being built, the production line of boiled-smoked and half-smoked sausages is being installed. After completion of the modernization, the Talina Group plans to increase its production capacity to 240 thousand tons of finished sausage products per year.</p>	<p>also professionals of other holdings can study under the programs of additional professional education.</p>	<p>employee. For employees who are part of the company's staff and have work experience, advanced training courses are organized, mastering new methods and techniques of work according to European standards. The center is a full-cycle breeding farm: from insemination to rearing piglets.</p>
<p>Danone Company. The company's activity is characterized by stable growth, the leadership rate is made on the formation of healthy eating habits among the Russian population.</p>	<p>Professional development of managers and ordinary employees</p>	<p>Corporate University, the development of programs for which a team of professionals from around the world. Geographically is located in the central office of the group in Paris. They have developed both large-scale programs for functional training for various areas (HR, marketing, finance,</p>
		<p>The recommended training includes 3 programs annually. It is mandatory to be trained in programs related to the environment in the agro-industrial complex, as well as safety at work.</p>

		etc.) and programs that help develop the managerial competencies of our managers. One of the centers of staff development in Russia is the Dairy Business Academy.	
The Rusmoloko LLC.	Compliance of employees with new production technologies	Raining center in conjunction with the Penza State Academy of Agricultural Sciences (PSAAS).	Training is organized through the creation of a special complex of three laboratories for the analysis of dairy products, feed and soil.
As of January 1, 2017, the gross milk production at the holdings was 57.5 thousand tons. Over the past few years, the company has shown consistently high results in all production indicators. The company's management is implementing an investment project aimed at increasing the livestock production capacity by building additional barns.			

The data of the presented analysis allow us to conclude that the dynamic development of the agro-industrial complex in Russia, as well as government support measures aimed at maintaining positive trends in the industry, dictate the need for business to develop promising personnel strategies. These documents allow to eliminate the solution of many problems that arise during the expansion of production or its modernization, including poor professional training, lack of motivation in training, the low prestige of agricultural professions among young people. In addition, the emergence of employers' personnel strategies makes it possible to organize a systematic work in the field of additional professional education together with Russian universities and move away from the practice of mechanically increasing the volume of training specialists for the agroindustrial complex. A breakthrough in agriculture, agricultural processing industries, the conquest of foreign markets by domestic producers is possible only when solving problems in training personnel for the assembly of agricultural enterprises equipped with new technologies.

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