

# Modern Technologies of Personnel Management in the Conditions of Digital Economy Development

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## Abstract

The main purpose of the study is to determine the main aspects of the introduction of modern technologies in the personnel management system in the context of the development of the digital economy. The human factor is one of the most important resources of any organization, which has a significant impact on the success of its activities. It is people who are the source of advantages that provide the company with victory in the competition. Therefore, the primary task of the organization's management should be the formation of effective personnel management systems. As a result, the main features of the introduction of modern technologies into the personnel management system in the context of the development of the digital economy were identified.

## Keywords:

*Technologies, management, personnel management, digital economy.*

## 1. Introduction

The development of personnel management technologies is characterized by modern trends, among which we can distinguish such as technological progress; mobility and other features of the new generation; new guidelines in communications and group work of staff. Certain trends are intertwined. Technological progress primarily changes the people themselves, their habits, mobility in communications. In addition, the structure of the organization, its information environment is changing. Emphasis in personnel management focuses on such human qualities as emotional intelligence, creativity, emotionality. A clear balancing of various types of company activities, a decrease in routine operations and their performers, an increase in the share of creative work, giving more weight to creative personnel are the development trends of the organization of the future. Personnel management technologies cover all

management functions and have special sub-functions. Personnel work planning is formed in accordance with the mission of the organization and a particular person from a development strategy to specific operational plans. The organization of relations with the employer is also undergoing changes both in the formal plane (today, employees have several employers; they work as freelancers, contract workers, etc.). In addition, technologies for interaction and organization of group work are changing. The development of an enterprise management system as an ecosystem involves the formation of an organization's development strategy, HR strategies that contain the values of the organization as a producer of goods and services and an employer; gives an opportunity to develop corporate culture and position each employee in the development of the organization. This approach allows us to consider modern personnel management technologies in accordance with the main sub-functions. Among them: strategic workforce planning; search, selection of personnel; staff training and development; personnel performance management; staff motivation through recognition and rewards; career development of personnel; motivation for leadership.

Control technologies change all kinds of human life. Personnel management today is a new management and information technology. By management technology we understand the methodology and set of functions and operations of management to achieve the goals. Information technology is a methodology and a set of information processes carried out for the formation, storage and use of electronic resources and communications. Automation of routine processes in production and management activities combines these two

technologies and allows you to effectively use modern methods of personnel management.

Modern successful organizations use end-to-end management and information technologies. The relevance of the development of such technologies in the organization and personnel management does not decrease with time. That is why the purpose of the research is to analyze the trends in the development of personnel management technologies and formulate recommendations for improving the personnel management system in the organization. Among the many scientific and applied publications on trends in personnel management, one can focus on such as technological progress; mobility and other features of the new generation; new guidelines in communications and group work of staff. The development of such trends is influenced by globalization and geopolitical aspects, demographic factors, the level of technology development, etc. If we analyze the trends in HR management, then among them we can distinguish such as the active use of artificial intelligence; development of electronic offices and electronic portfolios; introduction of blended learning and gamification methods in management and staff development; identification of talents and their effective use. The new management paradigm should take into account modern trends in the development of management technologies and form a system of personnel motivation.

The main purpose of the study is to determine the main aspects of the introduction of modern technologies in the personnel management system in the context of the development of the digital economy.

## 2. Methodology

The methodological basis of the study is general scientific and economic-statistical research methods: historical-economic, monographic, scientific generalization - to highlight conceptual approaches to the features of personnel management and the formation of a modern paradigm of its modern development; holistic approach, induction, deduction - to determine the essence of the basic concepts; system-structural analysis, comparison - to improve approaches to enterprise personnel management technologies; static method of economic analysis, correlation; abstract-logical; empirical.

## 3. Research Results

The main wealth of any company in the field of information technology in today's competitive environment is people, their intelligence, creativity and ability to create know-how. Therefore, a prerequisite for the successful functioning of the company and its development is to ensure a high level of human resource management system.

The effective functioning of any organization, first of all, is determined by the degree of development of its personnel. In the conditions of modern rapid aging of theoretical knowledge, skills and practical skills, the ability of an organization to constantly improve the professional level of its employees is one of the most important factors in ensuring its competitiveness in the market, updating and increasing the volume of production of goods or the provision of services.

Personnel development is a multifaceted and complex concept, covering a wide range of interrelated psychological, pedagogical, social and economic problems.

One of the functional elements of the personnel management system is the personnel development subsystem. Personnel development is included in a complex of interrelated elements (subsystems) that operate autonomously, but aimed at achieving one goal - effective and productive management. The personnel development management subsystem is a set of organizational and economic measures of the organization's personnel management service in the field of personnel training, retraining and advanced training. These activities include issues of professional adaptation, assessment of candidates for a vacant position, ongoing periodic assessment of personnel, business career planning and professional promotion of personnel, work with a personnel reserve, inventive and rationalization work in the organization. The implementation of personnel development measures is associated with certain costs, however, as experience shows, this contributes to progressive changes [1-3].

The professional development of personnel involves the following stages of the inclusion of individuals in the organization: adaptation, integration of employees into the team, direct performance of work duties, official and professional promotion. The formation of a personnel development system should be based on management using specially developed personnel development management tools [4-5].

The transformational changes of the 21st century significantly affect all spheres of society, among which the system of economic relations between people is such that it reacts quickly and is a driver of modernization for other segments. An effective economic model during this period requires new emphasis and sources of value creation, the mainstream is a focus on intangible assets and the priority role of human capital. In this context, the task of identifying a new paradigm of personnel management, which is being formed in the leading segments of the global economy around the issues of the formation and use of human potential at the macro level, the capitalization of its components and concentration within business models, is being updated. A prerequisite for the modernization of HR management systems is also the revolutionary discoveries of the behavioral sciences, the massive implementation of information and network technologies in all areas, the acquisition by the economy of signs of a new post-industrial model, which is defined by most scientists as a new economy based on knowledge. The rapid scientific and technological modernization, combined with the corresponding intellectual, mental and social shifts in the quality of human resources, requires changes in the theoretical, methodological and practical means of managing them in the direction of modernizing them [6].

Transformational changes in the paradigm of personnel management are caused by rapid changes and instability of economic relations. Personnel is the most important factor in the competitive advantages of a modern enterprise. The main source of economic success of a modern enterprise is effective personnel management, and managerial influence on personnel is carried out by special personnel management technologies aimed at each individual employee.

Evolutionary changes in personnel management have created the prerequisites for the transformation of personnel technologies into a broader concept - HRM-technologies, more adapted to the conditions of the modern economy.

HRM technologies in the new economy are a set of innovative methods and tools for personnel management, regulated by procedures, principles, technical and personal means of their implementation, which reliably ensure the achievement of desired results in the field of human resource management of an organization in the processes of solving urgent

business problems in accordance with the target development strategies.

The new economy is the objective socio-economic background that determines the dynamics of the development of human resource management paradigms and HRM technologies in particular, so the study of the development trends of the new economy is a necessary condition for analyzing the use of modern HRM technologies by enterprises.

Modern successful organizations use end-to-end management and information technologies in personnel management. The definition of HRM technologies presented in the first section assumes ways of automation/digitization. If we analyze the trends in automated HR management, then among them we can distinguish such as: the active use of artificial intelligence in the processes of selection and training of personnel; development of electronic offices and electronic portfolios; use of complex integration information management systems (for data collection and HR analytics, personnel administration); introduction of blended learning and gamification methods in management and staff development.

The development of modern economic science confirms that the most advanced technologies, materials, and raw materials are no longer critical to the acquisition of competitive advantages by industrial organizations. One of the important innovative technologies of personnel management is personnel controlling. Controlling acts as a kind of guarantor of effective management actions, a certain supporting management mechanism. That is why there is a separation of controlling as a subsystem of management, its service and economic support, aimed at providing information, consulting, methodological, coordination services for making rational management decisions. Controlling performs the role of service support for management in the overall management of the subject of activity, using information from the past (accounting, financial reporting), aimed at solving a significant range of issues, one way or another related to the future of the enterprise. Forming a personal information system, in contrast to accounting, which perceives the original accounting information as unchanged, controlling opens up opportunities for additional processing of any information and its addition for further use in planning, that is, for predictive purposes. It is through the existence of a kind of information environment

that controlling is allocated as an independent subsystem from the field of management.

An important indicator of a new economy based on knowledge, information, ideas and innovations is investment in the human capital that produces them. (Fig. 1).

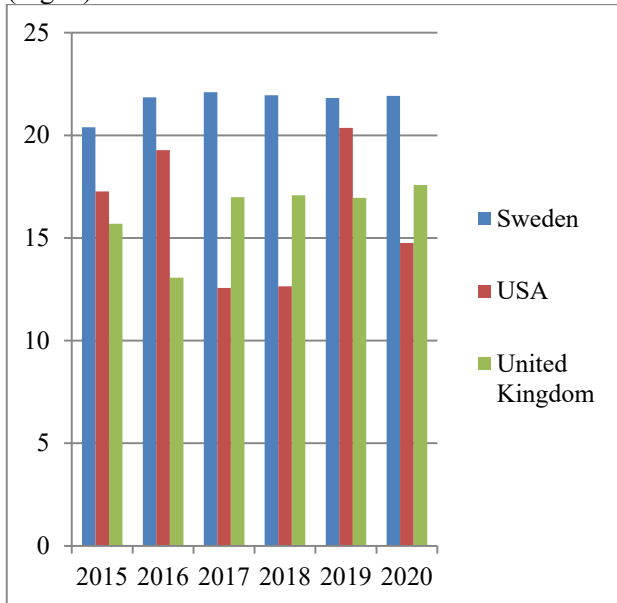


Fig. 1 Investment in human capital in the world during 2015-2020, % of GDP

The result of the introduction of the controlling methodology in the field of activity at the enterprise is the emergence of personnel controlling, the main functions of which are the creation of an information database on personnel, the study of the impact of the distribution of employees in the workplace on the results of the enterprise, the analysis of the social and economic efficiency of the application of personnel management methods, the coordination of work planning with personnel for planning other areas of the enterprise.

Personnel controlling is one of the latest trends in improving the efficiency of the human potential management system. Determining the importance of introducing personnel controlling in organizations, we consider the correct establishment of its functions as a fundamental element. Accordingly, the main goal of personnel controlling is to coordinate the processes of personnel management at the enterprise and provide information support for management decisions in the field of personnel management in order to improve their quality and effectiveness.

Labor productivity in the world is presented in Fig.2.

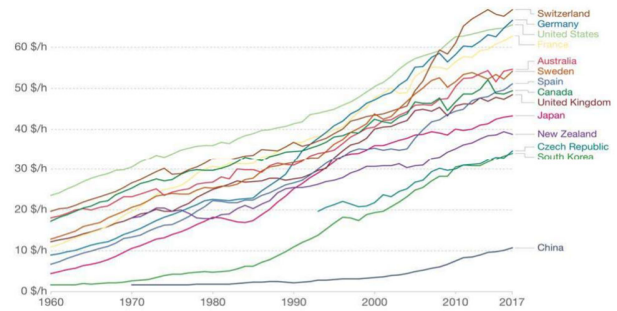


Fig. 2. Labor productivity in the world for the period 1960-2017, for indicator of GDP produced per hour worked

Innovation management in personnel work is a purposeful activity of enterprise managers and specialists of the personnel management service to ensure the pace and scale of the restoration of personnel work based on the introduction of personnel innovations into practice in accordance with the current and strategic goals of the enterprise. Management innovations involve, first of all, the restructuring of an enterprise, that is, a change in the entire organizational structure or its individual elements in order to optimize economic activity. This should also include innovations in the forms, principles and methods of remuneration. Great importance is attached to the introduction of new concepts for the development of corporate culture. Thus, managerial innovations are to a large extent innovations in the field of personnel management. The decisive factor in the process of introducing innovative technologies in the company's activities is the attitude of its staff to this process. Therefore, management needs to carry out the psychological preparation of employees to realize the production and economic necessity of implementing innovations, the personal and collective significance of innovations.

Personnel coaching is a tool for professional and personal development of employees of an enterprise, aimed at improving professionalism and qualifications, mobilizing internal resources and potential, in particular, creative and intellectual abilities, self-awareness, business qualities, innovation. Coaching is a tool that allows you to find the most effective ways to achieve the goals of the enterprise and put them into practice. Consider coaching as a way of communication. Unlike the methods of communication used in traditional management, coaching uses its own approaches in communication between the leader and the

subordinate. In response to the manager's questions, the subordinate is aware of all aspects of the task and the necessary actions. This clarity allows him to be sure of near success and thus take responsibility for his actions. Listening to the subordinate's answers to questions, the manager is aware not only of the action plan, but also of the train of thought that led to the chosen plan. The coach is much better informed than in the case of instructing the subordinate and therefore has better control over things. As soon as the dialogue and interaction in coaching becomes supportive rather than threatening, there will be no change in the behavior of employees in the absence of a manager. Coaching provides the manager with real, not illusory control, and the subordinate with real, not illusory responsibility.

Therefore, coaching is the most effective tool for improving the performance of staff. The difference between coaching and traditional management is determined by the style of communication with employees: the leader (coach) offers "necessary" questions and constructive feedback to subordinates. If traditional management achieves the goal through direct control and guidance, then coaching uses the authority of the leader and the ability to lead to the completion of the task to achieve the goal. At the same time, the manager (coach) does not act as an expert on the stated problem, which is being solved, does not make decisions for the employee. It creates conditions under which the employee independently solves the problem. The latter requires from the manager (coach) an appropriate level of competence, experience, and interest in ensuring the realization of the potential of subordinates.

Coaching technologies are used to motivate staff, evaluate and develop them, resolve conflict situations and resolve relationships within the team and are designed to solve the following tasks: - create a comfortable and creative atmosphere in the team; - to use the labor potential of the personnel as efficiently as possible; - encourage the initiative of employees; - to create a corporate culture at the enterprise; - to organize an effective system of personnel development; - motivate employees with the help of non-material incentives; - create the necessary conditions.

#### 4. Discussions

The rapid introduction of modern technologies, efficient forms of production organization, the emergence of new areas of employment, automation of management systems and the Internet have fundamentally changed the way business is done and the interaction of people in the process of personnel management at the enterprise. According to his personal and professional characteristics, an employee has become a key factor in the success of any business and the most valuable asset of an enterprise. Such a role of the human factor in the activities of enterprises has necessitated the search for ways to improve the efficiency of personnel management based on such technologies that allow creating the best conditions for realizing the potential of employees and maximizing satisfaction of their expectations and needs [7-10].

Modern conditions of a market economy necessitate the development of fundamentally new approaches to personnel management with the realization that the main reserve of an enterprise is employees, and beyond its borders - consumers of products, the quality and competitiveness of which is ensured by personnel. The technologies on which the personnel management system is based need to be constantly updated and refined, since the market environment for the functioning of national enterprises is constantly changing, therefore, in order to build a highly effective personnel management system, it is necessary to explore the essence and significance of the principles of forming the corresponding system in new market conditions [11-15]. The rapid introduction of new technologies, new forms of production organizations, the reduction and disappearance of individual enterprises, the emergence of new areas of employment, computers, electronic communication and the Internet are changing the way business is done and the interaction of people in the process of personnel management in an enterprise. Justification of the need to develop this system gives impetus to the use of modern enterprises in the construction of new innovative technologies and methods of using labor resources.

## 5. Conclusions

As a result, the main features of the introduction of modern technologies into the personnel management system in the context of the development of the digital economy were identified. The political and socio-economic transformations taking place in the world in recent years are accelerating innovation processes in all sectors of economic activity, stimulating enterprises to introduce new advanced technologies for the use of all types of resources. The personnel is the most important resource of the enterprise, ensuring the efficiency of its functioning to achieve the goals, and its high competence is the main part of competitiveness in the era of the knowledge economy. Therefore, in order to improve the educational level of the staff and at a high level of the image of the enterprise, it is necessary to constantly engage in the development of personnel at all levels. This problem can be solved only through the use of effective management technologies, including management in the field of human potential. The technology of enterprise personnel management is designed to optimize the management process through the choice of rational methods, operations and procedures for making managerial decisions in order to effectively influence the human component of the enterprise.

The creation of competitive production is always associated with the workers working in the enterprise. Modern innovative production organization technologies, optimal systems and procedures play a very important role, but the realization of all the possibilities that are embedded in new management methods already depends on specific employees and their knowledge, competence, qualifications, discipline, motivation, ability to solve problems and perceive learning. . With the further development of the personnel management system, further development of innovative personnel technologies will take place. The successful implementation of innovative technologies for personnel management should be accompanied in accordance with the goal of the system for assessing and developing employees, which will be the object of attention in further research.

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