

Features of Knowledge Economy Formation in Corporate Training

O V Mamatelashvili¹, A I Pudovina¹

¹Ufa State Petroleum Technological University

Abstract. The relevance of this problem is determined by the immaturity of the theory of forming knowledge economy at the setting of corporate training, as well as by the specific peculiarities of organizing corporate training in a market economy.

The transfer of Russian economy to the innovative model based on knowledge economy requires reconsideration of practically all patterns and methods of the knowledge economy formation both in corporations in general and in corporate training in particular.

The purpose of the paper is to reveal the need in acquiring new professional knowledge in corporate training and to show the importance of improving managerial skills and personal traits that increase motivation to learning and forming the knowledge economy.

The leading approach to this problem is the analytical method that studies the works of Russian and foreign researchers in the field of management in education. It includes stages from the identifying the subject matter of the category of "knowledge economy" to the features of forming "knowledge economy" in the setting of corporate training in corporations.

This research is impossible without the use of such scientific methods as analysis and synthesis, as well as methods of system analysis that combines organizational, personal and technological components, expert evaluations, re-engineering business processes of training. It is due to the fact that the formation of knowledge economy is carried out through corporate training, which can be considered as a specific socio-economic phenomenon.

These approaches allow considering the activity of large foreign and Russian production companies, which carry out corporate training, as a set of business and administrative relations. These relations emerge in the process of formation and development of the knowledge economy.

Let us list the main results of this work. The first part of the work deals with the theoretical substantiation and the subject matter of the category of "knowledge economy". The second part shows the features of knowledge economy formation in corporate training.

Materials of this paper can be useful for forming the knowledge economy for corporate training as a strategy of corporate training system in large production companies.

1. Introduction

The formation of the knowledge economy and the initiated transition of Russian economy to an innovative model has increased the value and effectiveness of investment in human resource development [1, 2].

The modern economy is based on knowledge. The intellectual capital comes out in the first place in terms of value, potential, flexibility and other parameters of efficiency. The success of the companies today crucially depends on the ability to create, develop and apply knowledge in practice, as well as to

introduce intellectual and information products. The increase of knowledge in the employees is the basis for creating and introducing innovative technologies, new products and services, which are based on staff intellectual and information potential in production and management. The current situation requires changes from the organizations that should in turn have a faster response to market offers. In order to accomplish this, they need to become centers of acquiring and distributing new knowledge and advance professional retraining [3].

Modern Russia is badly in need for qualified staff capable to form knowledge economy as a development strategy of in the innovative market economy. Organizations also have to develop new kinds of business and new markets and manage production and human resource with maximum flexibility.

Training the staff of the new formation through different models of the educational system is an integral part of improving the quality and efficiency of management through the knowledge economy in order to create a flexible market [4, 5, 6].

That is why the staff becomes the most important resource of the company. At the same time, it is the basis of the organization, being a combination of knowledge, creativity, practical experience, moral values, and corporate culture. The principles of innovation, innated in the corporate culture, are focused on constant improvement and long-term changes, perceiving the naturalness and continuity of the process of development, including continuity of education. All this opens more opportunities.

In order to achieve these goals, the authors need to solve two important tasks:

1. To identify the features of the knowledge economy (for it directly influences the state of corporate competitiveness in the market environment).

2. To offer corporate training as an element of forming the knowledge economy. This training should be focused on the market and troubleshooting, and should ensure performance and competitiveness of a corporation.

The analysis, conducted by authors, revealed the basic approaches to knowledge economy formation in corporate training and its development in conditions of modern Russia. At the stage of the transiting the domestic economy to an innovative model (the model of knowledge economy), it is objectively advantageous and necessary to develop corporate training as an element of knowledge economy formation. It becomes an integral part of the improving the quality and efficiency of management [7].

2. Methodological framework

The principles, theoretical positions and conclusions from the works of Russian and foreign researchers on the problems of development of theory and practice of knowledge economy, as well as international practices in the development of the knowledge economy formed the methodological basis for this work [8, 9].

The methodological base of knowledge economy formation in corporate training is a system and complex approaches. They combine organizational, person-centered and technological components, taking into account fast changing conditions of external and internal operating environment of a company. The principles and methods are aimed at identifying, collecting, storing, generalizing, distributing and using corporate knowledge and modern technical means of working with information.

Study of knowledge economy formation in corporate training used the scientific methods of structural analysis of the content of new knowledge on the basis of the "portfolio analysis" methodology. It also involved system analysis, methods of search for innovative ways of development, methods of complex economic analysis of economic activity, and methods of project activities. The fundamentally new in the methods is that the organization of corporate training is systematic and purposeful, clearly aimed at commercial success and achieving the strategic goals chosen by the management.

The basis of the research methodology is a complex interdisciplinary approach related to the principles of interconnection and interdependence in socio-economic systems. The research methods depend on its

object and purpose. A wide range of methods were used at different stages of the work and in solving individual research tasks. These include the methods of analysis (which makes it possible to decompose the studied object into its constituent parts), and synthesis (the combination of the parts obtained in the analysis into an integer). Other methods are system analysis, content analysis of scientific literature and prognostic method.

The data presented in the modern scientific works of Russian and foreign researchers formed an informational basis. The authors also paid much attention to review, analytical and reference materials on corporate training in large corporations.

International experience reveals the features of the knowledge economy formation practices and analyzes the factors influencing its development in corporate training. In the market conditions, it justifies the objective necessity of making investments in continuous training of the staff of any organization [10, 11, 12, 13, 14, 15].

3. Results

It became a common opinion that the efficiency of economic development of modern states depends to a great extent on the amount of funds invested in education.

Continuous staff development is the most important direction of the company's investments, and improvement of human resource is a reasonable and profitable sphere of capital investment.

The main purpose of such work with the staff is to motivate them to use their capabilities more fully through career growth in the interests of the company.

The last decade of the XX century passed under the sign of training and introducing the system of total quality management. This system controlled the participation of qualified staff in the production process.

Today, the achievements of Japan and the United States in the field of corporate education development are taken over by many foreign and Russian companies that perceive effective innovation management as an essential component of the economic growth [16, 17 18].

The XXI century assumes that the maximum performance and quality requires significant investment in staff development, as shown by the practices of developing countries like China, India, Brazil, Mexico, Malaysia, Singapore, etc.

It is namely because of this fact that the prospective program of establishing knowledge economy in China aims to reduce the country's dependence on foreign technologies and materials from 80 to 30%. Innovative economy, first of all, needs new creative staff. China's experience is very humbling: it proves that all countries have the opportunity to build innovative models of their economies, but each implements it with its "national color" [19].

In connection with the reorientation of economies of the leading countries (including Russia) on innovative models, the role of human resource gains more significance. Now it can be said that investments in it go to the first place among other directions of investment. It is about the formation of the knowledge economy, as well as about the formation and rapid development of the category "intellectual capital" [20].

One of the scientific definitions of the category "human capital assets" states that social capital (a kind of interpretation of the category "human capital assets") "represents shared knowledge, norms, rules and expectations regarding the interaction patterns that groups of individuals carry out (together) as repeating activities". It is the case of both the level of a separate organization and for corporate human capital assets [21].

Researchers distinguish the following components of this notion: the credibility of the organization as an integral expression of the state of its internal public relations; reputation of the organization, reflecting the state of external relations; strategy and tactics of business negotiations, which determine the value orientation of the subject of social relations; finally, corporate governance as adherence to the principles and values of the corporation.

Practicians and the majority of researchers in this field claim that the market reputation of a company at some time is directly proportional to the investments for training and improvement of qualification of its staff. This situation is explained by the fact that creative, highly qualified staff that has relevant knowledge competently carry out advertising, commercial and other activities of a company. They update the products efficiently and timely, responding to changing and monitored consumer demand. Such specialists replace obsolete elements of fixed capital in time, effectively conduct investment activities related to scientific and technological advance, and participate in the formation of innovative economy.

Innovation today is understood as a result (product) of the organization of human activity on creating new knowledge and their implementation in practical innovations (technologies, goods, services, works), allowing to satisfy existing and growing needs of individuals and society to a greater extent [22, 23, 24, 25, 26]. However, the innovative knowledge economy is not a local, casual, single, or little effective changes. It is about giving the qualities that would stimulate the most profound and voluminous development of new knowledge to the whole economy or most industries and other structural elements of the economy. The solutions also include constant transition of knowledge into the consumed form (innovations) by their commercialization in the market economy and subsequent wide distribution of innovations for the security of the state; development of competitive and effective national business, ensuring stable growth of welfare and improvement of the quality of life of all social groups of the country's population.

As it was mentioned above, for all developed countries the last century ended with a period of active transition to the model of knowledge economy. In other words, to the stage of social and industrial development, "in which the crucial role in the process of production and distribution is played by knowledge, skills and abilities of the employees together with the opportunities of organizations. For this reason, corporate rivalry occurs primarily in the development of these opportunities".

According to the latest scientific works, "knowledge economics should be described as the economy that creates, distributes and uses knowledge to accelerate its own growth and increase its competitiveness (of the country)" [27].

The main prerequisites for the formation of knowledge economy include:

- transformation of knowledge into the most important production factor (along with natural resources, labor and capital);
- increase in the share of services (including educational ones) in the volume of gross national products of countries, and outstripping growth of knowledge-intensive services for business, state and society;
- development and widespread use of new information and communication technologies;
- transformation of innovations into the main source of economic growth and competitiveness of corporations, regions and national economies;
- multiple growth in the value of human capital and investment in education and training.

According to the quoted theory [28, 29, 30], knowledge economy is based on the educational subsystem. The educational subsystem consists of:

- structural divisions of large corporations and companies;
- public and private educational institutions of secondary and higher vocational basic and additional education;
- basic and specialized (applied) research institutes and colleges;
- organizations that serve this subsystem and perform management functions like marketing, forecasting, planning, project financing of objects and subjects of education, and others.

The task of educational (socio-economic, and functional-technological) subsystem is forming the society of highly qualified, able to work in risky market conditions, dynamic, and creative people. The structure of institutions and the set of graduates should flexibly change and adapt to the needs of a highly dynamic market demand. Commodity products of this subsystem is embodied in the capabilities and subsequent actions of specific carriers (graduates of educational institutions – bachelors and masters, certified engineers of specialized divisions of companies), as well as increase of new knowledge, skills and abilities.

It is necessary to classify the sources of knowledge. Knowledge today is treated as an efficient, meaningful information, ready for being efficiently applied. It is a set of practices, values, contextual information, expert understanding. All of these form the basis for the assessment and integration of new practices and information. Such knowledge is valuable for the company. It is also a carrier of educational services or services to train the company's staff.

The management theory applies four conceptual levels of knowledge [31], one of which is the practical knowledge. It is the sphere of activity of the management and production "teams", which make the most efficient application of the target additional education and staff development.

Therefore, in terms of the level of conceptual importance, it is namely the sphere of practical knowledge that is the most important for the corporate training centers and similar structures in the corporate training system. This is due to the fact that having practical knowledge and its constant complementation (deepening) and expansion allows making informed management decisions in new situations.

At the personal level, the types of knowledge may be structured and divided into four degrees of usefulness:

- 1) knowledge as a result of cognition ("know what") or mastery of a subject on the basic level;
- 2) special qualification ("know how") or skill of practical performance. It requires more knowledge than can be found in books;
- 3) system understanding ("know why") or in-depth knowledge of causes and consequences. Its highest expression is intuition;
- 4) self-motivated creativity (understanding "why") or desire and motivation to achieve success [32].

Therefore, it can be stated that the company's employees are real potential developers of new knowledge, carriers of knowledge, skills and experience previously accumulated and tested through practice.

Corporate training, by forming knowledge economy, allows the managers to share relevant knowledge with other employees (if this knowledge is not confidential). They encourage their subordinates to do the same. The systematic exchange of knowledge between the employees of the company is very useful. Informal exchange of knowledge may occur during training, mastering of group and team work, work shadowing, and organizing round tables, where employees can ask questions to their management and receive qualified answers.

At the same time, the company should work for creating a stable synergy related to joining the knowledge, skills and experience of its employees. Their joint work contributes to the creation, exchange and distribution of knowledge within the company, thereby increasing its competitiveness.

In fact, it is generally recognized that corporate training and knowledge are based on individual knowledge, which can be both explicit and implicit. Explicit knowledge has a clearly expressed content, the details of which can be recorded and saved. Implicit knowledge is often not expressed and is based on individual experience, making it difficult to record and store it. Both forms of knowledge initially emerge as individual knowledge, but in order to be used for significant improvement of the corporation.

One can also distinguish two types of corporate training: adaptive training and advanced training. The first one focuses on change in response to the development of the business environment. Advanced training is related to the development of new abilities and opportunities of a corporation in new conditions.

Thus, it can be said that modern public views on the training process may be concluded as follows:

- training is a continuous lifelong process of acquiring knowledge, experience and skills;
- education is the ability to adequately act in real situations, make the right decisions and act efficiently;

- the value of education of a specialist largely depends on how the knowledge they possess fit into the system of corporate knowledge, how it complements and develops it.

In this way, knowledge is transformed into a major strategic resource of a corporation.

Corporate knowledge is based on scientific, industrial, technical, commercial information, and this information is always transformed due to the goals, objectives and values of a company and its employee. In addition, this information is always translated into a practical application. Therefore, the focus should be set on a person, development of his creative forces, his interest in the accumulation and update of his knowledge and its use in working activity.

Today it is necessary to distribute and use knowledge to achieve the corporate goals. Efforts should be made for creating an institutional environment that has all conditions for creating, rapidly distributing, sharing and using knowledge to achieve the corporate objectives and increasing its competitiveness.

Employees in their daily working activity manage the knowledge automatically, except for any particular special task. The exchange of experience, pre-training, on-the-job training and extracurricular training are considered normal.

Companies go through the efforts to create and distribute explicit knowledge (information materials, instructions, databases, etc.). This is a process approach, where knowledge management focuses on recording knowledge.

The key component is people, and efforts are directed at developing and stimulating communication between employees of an organization in order to the transfer implicit knowledge (creation of communities, exchange of experience, teamwork, etc.), close interaction between these people, their creativity, abilities, knowledge, innovation, and information technologies. These two concepts can be combined into an integrated (system) approach where knowledge management is based on synergy (collaboration). The best result is the transformation of training into an integral part of people's work. While paying serious attention to human capital assets, companies implement strategies of knowledge management aimed at training, development of creative abilities and skills in staff, exchange of experience, knowledge, communication of employees, etc.

At the same time transfer of knowledge and best practice is based on processes and methods of knowledge exchange, their reuse, transfer of the best experience for perfection of corporate activity. Employees are responsible for expanding, updating and exchanging both their own and corporate knowledge.

Transformation of staff development into one of the directions of structural adjustment of production, and strengthening of workers' motivation to high-performance and creative work became the most important tasks. The organization of corporate training aided making this decision.

When initiating corporate training in the main company's activities correlating with their priorities and objectives, as well as with competencies (corporate, managerial, technical and professional), the companies base this training on values and norms of corporate culture that promotes development of companies and formation of knowledge economy. The process of corporate training development becomes continuous and adaptive, as it exists and develops simultaneously with companies, serves their purposes and fulfills corporate tasks by its means. Analysis of the need in training as a set of measures concludes that corporate training is an efficient and economically viable way of achieving strategic and operational goals of a company. It contributes to the formation of knowledge economy, and presents the most appropriate way to solve existing or future problems in the activity of any category of the company's staff. Corporate training follows the company's priorities, which are the development of new technologies and methods, development of management skills, and meeting the requirements of regulatory and legislative bodies.

Let us highlight the main provisions of corporate education, which contributes to the formation of knowledge economy, namely:

- creation of common principles of strategic management and staff development;

- introduction of new methods and forms of advanced training and other directions of staff development on the basis of rendered educational services;
- development of economic motivation and social guarantees of increasing labor productivity and introduction of the system of total quality management in enterprises;
- study of human resource development problems;
- preparation of normative and methodological materials for staff development.

The purpose of corporate training is to form a team that solves the tasks with the highest productivity, minimum costs and technological reliability, forming the knowledge economy in the corporation.

Staff training, together with the agenda, is one of the important ways to the company's success in establishing knowledge economy.

The shared objective of corporate training can be defined as planning and creating corporate educational system of staff development. Its main task is to adapt the staff (and, above all, the managers) to the fundamentally new working conditions in the setting of knowledge economy formation.

The main task is to create a system of professional development of workers that can guarantee a high level of proficiency through new training methods. Firstly, one needs a system approach to its creation. This approach lies in representing the process of formation and development of corporate training as a part of the overall management systems of the company and knowledge economy development. The company solves this problem through considering the current state of its own development and maximum use of the gained experience, as well as technologies of its transfer and development of innovative solutions.

Secondly, one needs the precise formulation of criteria of efficient corporate training system. These criteria include:

- the training system that is appropriate for the situation it is developed for;
- the content of the training services that correspond to the company's activities;
- the whole educational process that is focused on the solution of prospective corporate tasks;
- specific training programs that are aimed at achieving practical results;
- interconnection and interdependence of the corporate training system and other elements (subsystems) of the integrated human resource management system;
- availability of training for all levels of management of the company (corporate, regional, functional-structural, group, and individual one);
- development and continuous improvement of the implementation model of the corporate training system;
- accumulation and transfer of best practices in this field in the company and its branches.

The corporate training system is based on continuous education as a dynamic developing, giving new applied knowledge, consolidating practical skills and horizontal communication, to a large extent forming the philosophy of a modern company and knowledge economy.

Corporate training allows forming a unified corporate principles of training, contributing to the development of professionalism, corporate spirit, a sense of community in the specialists team, gathered to achieve a common goal. In the course of training, attention is drawn to active participation of specialists in solving real problems of a company. After completion of training, specialists continue their work, where they apply the obtained knowledge and skills. In this sense, the interest of all members of the team in exchanging experience in solving specific problems on the basis of the obtained knowledge is very significant. This approach allows combining the theory and practice with the visible benefit not only to the trainees, but also to the structures that send them to study. In addition, the friendly atmosphere of experts involved in educational events positively affects the trainees and helps to improve the efficiency of this model of training, forming the knowledge economy.

The results of corporate training are amplified by working operational links between the attendants, aimed at wider exchange of information and distribution of useful experience. Such system gives real opportunity to use

intellectual potential of managers and experts, knowledge and experience of which become the property of their colleagues and subordinates.

Knowledge economy formation in corporate training is an essential element of the company's production investments to the future. Priority of investments in development of corporate training is due to the following needs in:

- preservation and strengthening of the company's competitiveness, because training in working with new equipment and technologies is impossible without significant investments (this is the goal);
- increase in the intellectual and labor (professional, artisanal) creative activity of each employee for the development of the company (this is the means);
- ensuring the growth of performance, efficiency and quality of work (this is a result, indicators of dynamics, evaluation of results of employee training).

In the setting of the establishment of the knowledge economy, the case is the evolution of piecewise training towards the integral (system) concept of the staff development. The main direction of corporate training development is providing the company with well-trained employees taking into account the strategy of training.

Corporate training for new knowledge becomes an important instrument of increasing the efficiency of the company. It is due to the fact that:

- modern information and communication technologies allow the constant exchange of ideas and information;
- decisions are made more reasonably, quickly and cost-effectively;
- cooperation is consolidated through self-organizing groups;
- the degree of efficiency of relations with consumers increases;
- learning organization becomes an efficient form of management of constant changes.

Unlike tangible assets, intangible resources are compact, movable, and rapidly lose their value unless they are updated. World class companies are updating them through flexibility and tendency to learning and cooperation. They invest in the best concepts, summon up ideas and practices, take care of knowledge and skills of their employees, cooperate with other companies to expand their competence and achieve common goals. The work on development of corporate training in large industrial corporations has become a continuous, carefully planned and controlled process of knowledge economy formation.

In summary, it can be noted that corporate training based on the study of practical business needs, allows to understand how to make the business more successful, how to implement the ideas of management, and then follow the new knowledge being introduced in practice.

4. Discussion

Drawing significant attention to the human capital assets, organizations implement different approaches to the formation of knowledge economy. However, the scientific literature did not pay due attention to the need for its formation through corporate training.

The late XX century introduced the term "human capital assets" [33, 34, 35, 36, 37, 38]. It meant the presence of a very certain personnel in the organization (according to its quantity, structure and quality) that can and does ensure the achievement of operational and strategic goals of the organization through its activities.

In his work "Tasks of management in XXI century" [39], one of the well-known modern theorists of management Peter Drucker sets out "8 principles of the organization-the leader of changes".

In terms of practice, it means that all forms of corporate training should be imbued with team spirit forming the knowledge economy.

I. Nonaka and H. Takeuchi [40] proposed a model that considers knowledge as the interaction of its explicit and implicit types. In this case, knowledge comes from outside or is born in the organization

itself. It moves from the individual level to corporate and back. The same occurs in the process of corporate training.

The management theory applies four conceptual levels of knowledge [31], but it is namely the practical knowledge that is the sphere of activity of the management and production "teams". It makes the most efficient application of the target additional education and staff development.

Therefore, in terms of the level of conceptuality, it is the sphere of practical knowledge that is essential for the formation of knowledge economy in corporate training. This is due to the fact that having practical knowledge and its constant complementation (deepening) and expansion allows making informed management decisions in new situations.

Various researchers tried to classify knowledge in the corporation [31]. Some believed that there were least three categories of knowledge in the firm. They are "know how" (practical knowledge), "know why" (theoretical knowledge) and "know what" (strategic knowledge). Other typologies of knowledge distinguished encoded (know what), habitual (know how), scientific (know why), as well as commercial types of knowledge. It is obvious that managers need all types of knowledge if they are to improve the company's performance. It is difficult to find a meaningful and comprehensive classification of knowledge, but it is obvious that corporate knowledge should be based on understanding and experience. It should also form a basis for the development of distinctive abilities and activities increasing the value of the company.

The most complete classification of knowledge as prerequisites for action was developed by scientists P. Drucker and M. Zelezny [41, 42].

In market conditions, only the knowledge that is relatively easy to be perceived by employees and become commercial (in other words, suitable for use in market relations of this company and formation of the knowledge economy) are important for the company and for the carrier. Commercialized knowledge is relatively easy to be transformed into commodity products, and thus bring additional revenues and profits of the company.

As can be seen from the above discussion, the researchers considered the questions of classification of knowledge as a renewable resource in detail. However, the aspect discussed in previous studies of the problems of forming knowledge economy through corporate training was not considered. From authors' point of view, it became more relevant due to the formation of corporate training system, which enables to use the system approach to forming the knowledge economy of corporate training.

5. Conclusion

The first stage of the research revealed and analyzed the practice of establishing knowledge economy abroad and recorded the transition to the knowledge economy through corporate training. On the second stage (which was a result of the developed methodology), it was necessary to show the features of forming knowledge economy in corporate training based on human capital assets.

The last in time stage of formation of the theory of corporate human resource management became the stage of emergence of knowledge economy and the beginning of economic sphere of Russia focusing on the innovative model of national economy.

The task of Russia's withdrawal to the leaders of social and economic advance can be achieved from fundamentally new directions. One of such directions, and perhaps the most important one, is the transition to the knowledge economy, to the increasingly efficient use of gained and intensively created knowledge in corporations.

Corporate training becomes a vital element of any corporate strategy. Advance in science and technology accelerates the process of obsolescence of knowledge and stimulates the need for their update and replenishment. It is characteristic that today experts understand very well that training should be proactive and practical.

Even the brief description of knowledge economy shows that in the conditions of its formation in Russia the role of corporate training undergo significant changes.

6. Recommendations

The paper presents the results of the conducted research aimed at the search and development of theoretical and methodological approaches to the formation of knowledge economy in corporate training. The authors clarify the role of corporate training in the process of forming knowledge economy to achieve strategic competitive advantages.

The main emphasis of corporate training should be made on innovative continuous (i.e., constant updating of knowledge and development of employees) and advanced (i.e., development of perspective knowledge and skills according to the strategy of corporate development) education of all staff. In the end it will contribute to the formation of the knowledge economy of a corporation.

The practical significance of the research results is the possibility of any corporation to apply developed methodical approaches to the formation of business models of their own training systems in accordance with the requirements of the innovative knowledge economy.

References

- [1] Aaker D 2002 Strategic market management *Saint Petersburg: Piter*
- [2] Akoff R L 2002 Planning the future of the corporation *Moscow: Sirin*
- [3] Mil'ner B 2003 The concept of knowledge management in modern organizations *Rossiyskiy zhurnal menedzhmenta* **1**
- [4] Boksal P & Perser D 2009 Strategic human resource management: where we come from and where should we proceed *Rossiyskiy zhurnal menedzhmenta* **3**
- [5] Drogobytsky A 2008 Theoretical and methodological bases of human resource activities in a large corporation *Problemy teorii i praktiki upravleniya* **5**
- [6] Lapidus V A 2000 Total quality management (TQM) in Russian companies *Moscow: Novosti* 432
- [7] Mil'ner B 2008 Knowledge economy and new requirements to management *Problemy teorii i praktiki upravleniya* **1**
- [8] Bekker I, Kh'yuzlid M & Ul'rikh D 2007 Measurement of the HR department efficiency People, strategy and performance *Moscow: Vil'yams* 304
- [9] Mil'ner B 2008 Intangible assets of a company *Problemy teorii i praktiki upravleniya* **3**
- [10] Rayt P M & Bossnel U R 2007 Integration of human resources management: a review and synthesis of micro- and macro approaches to the study of human resource management *Rossiyskiy zhurnal menedzhmenta* **1**
- [11] Rayt P M, Danford B B & Snell S A 2007 Human resource and the firm's resource concept *Rossiyskiy zhurnal menedzhmenta* **1**
- [12] Senge P 1999 The fifth discipline: the art and practice of self-training organization *Moscow: Olimp-Biznes* 408
- [13] 2006 Knowledge management *Moscow.: Al'pina Biznes Buks* 208
- [14] Fitts-yants Y 2006 Profitability of investments in staff: measuring the economic value of staff *Moscow: Vershina* 320
- [15] Kh'yuzlid M 2009 Influence of human resource management practices on employee turnover, labor productivity and financial results *Rossiyskiy zhurnal menedzhmenta* **3**
- [16] Egorshin A P 2003 HR management: university coursebook *N Novgorod: NIMB* 720
- [17] Ueyn D P Training and development of staff: the best examples in the world practices www.expo.trainings.ru/conference/archive
- [18] Shagiev R R & D'yakonova N A 2006 Human resources of oil and gas companies: monograph 2nd

- ed., rev. and ext *Moscow: Institut neftegazovogo biznesa* 292
- [19] Ovchinnikov V 2008 The new goal of China is to establish knowledge economy *Rossiyskaya gazeta*
- [20] Volgina N A & Odegova Yu G 2004 Labor economics (social and labor relations): coursebook Eds. *Moscow: Ekzamen* 736
- [21] Savel'eva M 2008 Social capital in region *Problemy teorii i praktiki upravleniya* 6
- [22] Lapin N 2008 Innovative development strategy: national innovative system *Problemy teorii i praktiki upravleniya* 5
- [23] Lapin N 2008 Purposeful implementation of knowledge in innovations *Problemy teorii i praktiki upravleniya* 6
- [24] Arutyunov V, Strekova L & Tsyganov S 2010 Innovations and a system of corporate training *Vysshee obrazovanie v Rossii* 1
- [25] Chan'ko A D 2008 Management team as a source of dynamic abilities of a company *Rossiyskiy zhurnal menedzhmenta* 1
- [26] Sharanin A S 2008 Mechanism of a company's innovative development *Innovatsii* 1
- [27] 2004 Innovative management in Russia: issues of strategic management and scientific and technical security *Moscow: Nauka* 4
- [28] Makarov V & Kleyner G 2008 Economic development of Russia and the problems of knowledge microeconomics *Problemy teorii i praktiki upravleniya* 2
- [29] Popov E V, Vlasov M V & Gurina K O 2008 Formation of knowledge management institutes as an innovative process *Innovatsii* 5 96–100
- [30] Edvinson L 2005 Corporate longitude. Navigation in an economy based on knowledge *Moscow: INFRA-M*
- [31] Mil'ner B 2008 Concept, varieties and sources of knowledge *Problemy teorii i praktiki upravleniya* 2
- [32] Quinn J B, Anderson P & Finkelstein S 1996 Managing Professional Intellect *Harvard Business Review* March–April 77
- [33] Bekker I, Kh'yuzlid M & Ul'rikh, D 2007 Measurement of the HR department efficiency People, strategy and performance *Moscow: Vil'yams* 304
- [34] Becker G S 1994 Human capital: a theoretical and empirical Analysis (N.Y.)
- [35] Becker G S, Huselid M & Ulrich D 2001 The HR scorecard Linking people, strategy and performance *Harvard Business School*
- [36] Andreeva T E 2006 HR management in the period of changes in Russian companies: common and efficient methods *Rossiyskiy zhurnal menedzhmenta* 2
- [37] Kleminova T 2009 HR management and company's performance: theoretical debates and empirical studies *Rossiyskiy zhurnal menedzhmenta* 3
- [38] Orlova T 2008 Intellectual capital: concept, subject matter, kinds *Problemy teorii i praktiki upravleniya* 4
- [39] Druker P 2005 Tasks of management in the XXI century *Moscow: Vil'yams*
- [40] Nonaka I & Takeuchi Kh 2003 The knowledge-creating company *Moscow: Olimp-Biznes*
- [41] Information technology in business Encyclopedia ed. Zelezny M. *Saint Petersburg: Piter* 367
- [42] Solovov D B 2017 Improvement of protective relaying efficiency for motor drives at mineral processing plants *Industrial Engineering, Applications and Manufacturing (ICIEAM), International Conference on*. pp. [Online]. Available: <http://dx.doi.org/10.1109/ICIEAM.2017.8076343>