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THE APPLIED ASPECTS OF ENTERPRISE CAPABILITY ASSESSMENT

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ПРИКЛАДНІ АСПЕКТИ ОЦІНЮВАННЯ ПОТЕНЦІАЛУ ПІДПРИЄМСТВА

Purpose. To explore the main components of enterprise capability, and develop the integrated method concerning the enterprise capability assessment.

Methodology. The methodological approach concerning the socio-economic estimation of enterprise capability has been developed. Unlike existing approaches, it allows assessing the enterprise capability comprehensively through combining two kinds of estimation – social and economic, and converges them into a single integrated indicator. The results have been obtained through the following methods: to define the essence of the "enterprise capability", the systematization and generalization methods have been used; to point out the main components of enterprise capability, the comparative research method has been applied; to determine the integrated index of the enterprise capability estimation, the method of constructing integrated indicators has been used.

Findings. In today's highly competitive business world, the need for the efficient enterprise capability management is greater than ever. As more enterprises begin to compete on a global scale, the effective use of enterprise capability will become imperative for them to improve their business activities. The definition of enterprise capability has been given and the main components of enterprise capability have been pointed out. The comprehensive method to estimate enterprise capability that takes into account both social and economic components has been offered. The methodical approach concerning the integrated estimation of enterprise capability has been developed.

Originality. The novelty deals with the inclusion of a general indicator of the social component of enterprise capability to define the integrated index of enterprise capability.

Practical value. The practical significance of the methodological approach is that the method allows assessing enterprise capability comprehensively through combining two kinds of estimation – social and economic, and converges them into a single integrated indicator. It assures a comprehensive approach to the socio-economic estimation of enterprise capability, sets a formal basis for making decisions and provides a way to allocate enterprise resources reasonably. Practical implementation of this method will affect the current condition and trends of the enterprise, help to make forecasts and plans for its development and capability efficient use.

Keywords: *enterprise capability, economic component of enterprise capability, social component of enterprise capability, enterprise capability management, integrated estimation of enterprise capability*

Problem setting. A business enterprise operates in a constantly changing environment. Changes in the business environment create risk and also provide opportunities for growth. As more enterprises begin to compete on a global scale, the effective use of enterprise capability will become imperative for them to improve their business activities. Generally speaking, the capability is an integral part of any enterprise covering such components as production, labour, finances, investment, innovation, marketing, logistics and others. The comprehensive assessment of enterprise capability in a market economy and increased competition is relevant and important. There is no general methodological approach to the estimation of enterprise capability that could help to conduct a comparative analysis of capability level of enterprises and make their rating by the integrated index of capability for managers and investors.

Recent research and publications analysis. The main task of any enterprise is to use the capability to gain sustainable development and competitiveness. Among all the works devoted to specific issues of enterprise capability management and capability estimation, the scientific papers of O.I. Amosha, O.E. Kuzmin, A.A. Pylypenko, S.M. Voronina, N.M. Markova, R.M. Naboka, T.O. Sobolev, N.P. Piatkova, V.L. Smolyuk, M.S. Saxena, D. Ulrich, D.G. Lake should be mentioned.

The entire set of estimation methods for enterprise capability presented in the economic literature can be divided into two main groups. The authors of the first group emphasize the capability value assessment [1, 3]. The second group authors suggest evaluating of enterprise capability based on already known economic indicators [2]. Consequently, no attention is paid to the study of capability features of the enterprise as an integrated assessment that combines not only economic but also the social aspect.

Unsolved problem. There was no attempt to determine the socio-economic estimation of enterprise capability, which could allow making reasonable conclusions based on a combination of various aspects of this assessment. Therefore, it is necessary to discuss the issue of the socio-economic estimation of enterprise capability. This assessment should be integrated. It must cover a range of aspects and lead to a single integrated index based on general indicators.

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The goal of this article is to develop a methodological approach concerning the estimation of enterprise capability through the measurement and estimation of different quantitative and qualitative parameters characterizing various components of enterprise capability.

Key research findings. A business enterprise operates in a constantly changing environment. Changes in the business environment create risk and provide opportunities for growth. The effective use of enterprise capability is indispensable for any business because it covers the process through which an enterprise develops the internal capability to most efficiently and effectively provide its work and to sustain itself over the long term.

Performance measures and metrics are essential for effectively managing enterprise capability, particularly in a competitive global economy. The challenge for managers in changeable environment is to develop suitable measures and metrics to estimate the enterprise capability and make right decisions that would contribute to enhance enterprise competitiveness. Now the question is what metrics can be used and out of them, which ones should be given priority for estimating the enterprise capability.

As a result of studying the economic literature, we can conclude that the estimation of enterprise capacity is often confined to assessing its economic component, and the evaluation of social component is overlooked, which in its turn is unable to provide a comprehensive approach to this estimation. Therefore, it is appropriate to propose a methodological approach for capability estimation by its structure, which is based on the use of single, general and integrated indicators.

We offer to carry out the enterprise capability estimation in several steps (figure).

The first step involves identifying the key areas of integrated assessment. In order to estimate the enterprise capability we suggest two types of the assessment: economic and social. The economic capability is a set of separate capabilities that forms the socio-economic ability of the enterprise for the most efficient and effective work over the long-term prospects.

The first key area of integrated assessment is the enterprise capability estimation in economic terms that covers the evaluation of its components such as production, finances, investment, innovation, marketing, logistics, infrastructure, information, etc.

The second key area of integrated assessment is the enterprise capability estimation in social terms. We consider that the enterprise capability estimation in social terms should cover the assessment of skills and employee abilities, assets and resources that ensure proper working environment and employee development. The social component of enterprise capability includes human recourses, organizational and motivational capabilities. Therefore, the estimation of enterprise capability in social terms must include such three main components as human resources, motivation and organizational capabilities.

The second step involves selecting the key indicators for each area of integrated assessment. Let us look at the economic components of enterprise capability in details.

Production capacity comprises productive resources, entrepreneurial capabilities and production linkages and consists of land, fixed assets, working capital and intangible assets, which together determine the capacity of an enterprise to produce goods and services [4]. The main measures of production capacity are the fixed asset turnover ratio, the ratio of fixed assets to funded debt, the ratio of fixed assets to capital employed, the ratio of fixed assets to total assets, the ratio of net profit to fixed assets, the fixed assets to equity ratio, the working capital ratio, the quick ratio, the cash ratio, the accounts receivable turnover, the accounts payable turnover and the intangible assets metrics.

Financial capability covers all funds that are required to do economic activity. It consists of its own funds or borrowed funds. Investment capability is a part of financial capability that can be broken into three basic groups: ownership investments, lending investments and cash equivalents [9]. The main measures of investment capability are the return on investment, the return on capital employed, the return on equity, the capitalization rate and total stock return. Innovative capability is also a part of financial capability that is the enterprise ability to use effectively its own internal resources for developing, creating and implementing new product, process, marketing and organizational innovations. The innovative capability is measured by the return on innovation investment, the return on research and development, the corporate spending on research and development and so on.

Marketing capability is the enterprise ability to determine the need and demand of customers in order to meet the needs of marketing outlets [6]. The common metrics used to measure the marketing capability are the market share, the return on marketing investment, the market volume and the market value, the market potential of an enterprise.

Logistics capability is the enterprise ability to meet customer demands through the planning, control and implementation of the effective movement and storage of related information, goods and services from origin to destination [7]. The main measures of logistics capability are the inventory turnover, the logistics expenses, the logistics profit, the logistics asset value, the total logistics cost, the return on logistics assets and the logistics value added.

Information capability is the enterprise ability to collect, store, manage, exchange internal information in order to track, detect and control the strengths and weaknesses of the internal environmental factors and the threats and opportunities of external environmental factors [8]. The information capability is measured by the intangible assets-to-total assets ratio, the return on investment in software, the return on investment in intellectual property and so on.

Infrastructural capability is basic physical and organizational structures and facilities (e.g., buildings, roads, equipment, and power supplies) required for the operation of an enterprise and satisfaction of staff social needs. The main measures of infrastructural capability are the return on investment in buildings, the return on investment in equipment and the return on investment in structural facilities.

Let us look at the social components of enterprise capability in details.

Human resources capability covers the employee ability related to employee's interpersonal connections and refers to the stock of competences, experience, skills, knowledge and

personality attributes embodied in the ability to perform labour. Human capital is the most valuable assets of any organization and the success of an organization largely depends on the management of its human capital [9].

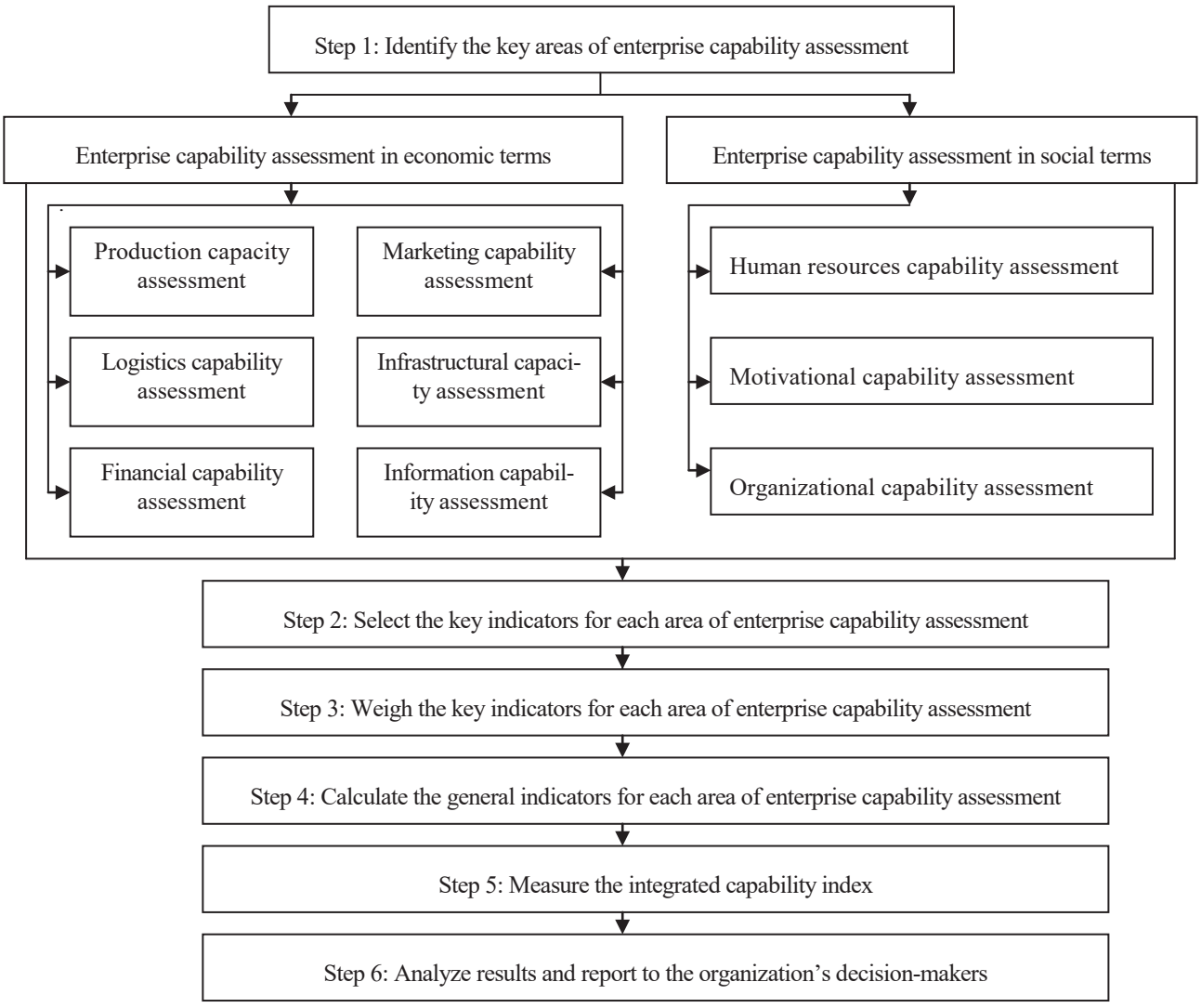

Fig. Steps of the enterprise capability assessment

Common metrics that are offered to estimate the human resources capability include the return on investment in human capital, the employee absence rate, the employee turnover rate, the employee retention ratio, the new hires ratio, the labour productivity as output per hour worked, the labour productivity as output per employee and the labour productivity as revenue per employee.

Motivational capability determines the employee behaviour and engagement that is shows how employees are committed to their organization's goals and values, motivated to contribute to organizational success through the training programs and professional development opportunities.

The motivational capability is suggested to measure by the training investment value, the return on investment of training program, the return on investment of employee recognition and rewards, and the return on investment for employee wellness programs.

Organizational capability covers the enterprise ability to create appropriate occupational health and safety, time management in the workplace and to implement corporate social responsibility [5].

Common metrics that are proposed to evaluate the organizational capability are the return on investment for workplace safety and occupational health, the severity rate, the return on investment for employee safety program, the return on investment in corporate responsibility, the enterprise tax payment rate, the return on investment for job creation and the return on investment for environmental management.

The third step involves weighting the key indicators for each area of enterprise capability assessment. Since not all the partial figures have the same weight in determining the general indicators we propose to calculate the weight factors using the method of expert survey. The experts are the top executives of the enterprise. They answered questionnaire

concerning the enterprise capability assessment in economic and social terms.

The fourth step involves calculating the general indicators for each area of enterprise capability assessment. The calculation formulas of general indicators for each area of integrated assessment are given below.

$$GI_{ET} = PF_{PCA} \cdot W_{PCA} + PF_{MCA} \cdot W_{MCA} + PF_{LCA} \cdot W_{LCA} + PF_{FCA} \cdot W_{FCA} + PF_{IICA} \cdot W_{IICA} + PF_{ICA} \cdot W_{ICA};$$

$$GI_{ST} = PF_{HRCA} \cdot W_{HRCA} + PF_{MotCA} \cdot W_{MotCA} + PF_{OCA} \cdot W_{OCA},$$

where GI_{ET}, GI_{ST} – are general indicators of enterprise capability in the economic terms and social terms respectively; $PF_{PCA.}$ – is partial figure for the production capacity assessment; $PF_{MCA.}$ – is partial figure for the marketing capability assessment; $PF_{LCA.}$ – is partial figure for the logistics capability assessment; $PF_{FCA.}$ – is partial figure for the financial capability assessment; $PF_{IICA.}$ – is partial figure for the infrastructural capacity assessment; $PF_{ICA.}$ – is partial figure for the information capability assessment; $W_{PCA.}, W_{MCA}, W_{LCA}, W_{FCA}, W_{IICA}, W_{ICA}$ – are weight factors of partial figures for enterprise capability in the economic terms; $PF_{HRCA.}$ – is partial figure for the human resource capability assessment; $PF_{MotCA.}$ – is partial figure for the motivational capability assessment; $PF_{OCA.}$ – is partial figure for the organizational capability assessment; $W_{HRCA}, W_{MotCA}, W_{OCA}$ – are weight factors of partial figures for enterprise capability in the social terms.

The fifth step includes measuring the integrated capability index and establishing its scale values.

The calculation of partial (defined by standard methods) and general (calculated by average methods) indicators is based on the statistical information required to determine separate capability components.

Thus, it is advisable to use a comprehensive framework that combines two components to estimate enterprise capability. Accordingly, the integrated index of enterprise capability is the result of the socio-economic assessment of capability components, which is based on the definition of general indicators and their consolidation into a single type by application of multivariate averages.

The calculation formula for the integrated capability index based on the geometric mean of general indicators is given below.

$$ICI = \sqrt{GI_{EC} \cdot GI_{SC}}.$$

If the integrated capability index is close or equal to one, the enterprise capability is used effectively. On the other hand, if the actual value of the integrated capability index is close to 0, the level of capability use is inefficient.

A business capability is what an enterprise needs to be able to do to execute its business strategy. Enterprises should assess the capabilities in order to operate the business by examining the financial and strategic impact. All capabilities are not created equal. Some contribute more to enterprise competitiveness and its value than others. The effective use of enterprise capability allows achieving the following:

- A higher growth rate (sales, revenues) than competitors and the market as a whole.
- Higher than average net profit (compared with others in the same industry).
- Better than average returns on investment – again, compared with competitors.
- A high (and perhaps leading) market share – measured in either value or volume terms.
- The strongest brand reputation in the market, e.g. brand awareness.
- A clearly defined unique selling point that enables the business to differentiate its product or service in the eyes of customers.
- Significant control of distribution channels in the market (e.g. products that are demanded by intermediaries who provide distribution to the final consumers).

The sixth step involves analyzing results and reporting to the organization's decision-makers. It covers the mechanisms that are established for gathering available data, processing these data and making conclusion about the level of capability use.

The integrated capability index is a tool that can be used to monitor the level of capability use, conduct a comparative analysis of the level of capability use and make rational managerial decisions.

The information on the level of capability use are used by executive level managers to manage the limits of an organization's resources, such as its labour force, human capital, natural resources such as raw materials, tangible resources such as property or production machinery, office space, technology, equipment and intangible resources such as brand image and knowledge, financial resources.

The general indicators of enterprise capability in the economic terms and social terms and the integrated capability indices have been calculated for four enterprises, such as LLC "SE Bordnetze Ukraine" (that belongs to wire har-nesses and electronics sector), Vatra Corporation and Schreder Ltd (they belong to lighting equipment sector), and Alpha-Gaspromkomplekt LTD (that belongs to gas equipment sector).

Table

Calculation results

Enterprises	Sector	General indicator values and integrated capability index		
		GI_{ET}	GI_{ST}	ICI
1. LLC "SE Bordnetze Ukraine"	Wire harnesses and electronics	0.89	0.53	0.69
2. Vatra Corporation	Lighting equipment	0.6	0.36	0.46
3. Alpha-Gaspromkomplekt LTD	Gas equipment	0.48	0.29	0.37
4. Schreder Ltd	Lighting equipment	0.83	0.48	0.63

The integrated capability index ranges from 0 to 1. The integrated capability index between 0 and 0.3 means the weak level of capability use; 0.3–0.7 means the moderate level of capability use and 0.7–1.0 indicates the strong level of capability use.

Conclusion is that the LLC "SE Bordnetze Ukraine" has the highest level of capability use and the Alpha-Gaspromkomplekt LTD has the lowest level of capability use.

Conclusions. To sum everything up, we must mention that this methodological approach allows assessing enterprise capability comprehensively through combining two kinds of evaluation – social and economic and converges them into a single integrated indicator. It provides a comprehensive approach for the enterprise capability estimation sets a formal basis for making decisions and helps allocating enterprise resources reasonably. Practical implementation of this method will affect a current condition and trends of the enterprise, help to make forecasts and plans for the development and use of enterprise capability.

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Мета. Розроблення комплексного методу оцінювання потенціалу підприємства.

Методика. Розроблено методичний підхід до соціально-економічного оцінювання потенціалу підприємства, що, на відміну від існуючих, дозволяє всесторонньо оцінити потенціал підприємства, оскільки поєднує дві оцінки – соціальну та економічну, зводить їх до єдиного інтегрального показника. Результати дослідження отримані за рахунок використання таких методів: систематизація та узагальнення – для визначення сутності поняття "соціально-економічний потенціал підприємства" та класифікації його складових; побудови інтегральних показників для розрахунку інтегрального показника оцінювання потенціалу підприємства.

Результати. Оскільки все більше підприємств починають конкурувати на міжнародних ринках, ефективне використання потенціалу підприємства є важливим напрямом управління для того, щоб покращити результати діяльності. У роботі роз'яснена сутність соціально-економічного потенціалу підприємства та виокремлені основні його складові. Запропоновано здійснювати комплексне оцінювання потенціалу підприємства з урахуванням двох його складових – економічної та соціальної. Розроблено методичний підхід до інтегральної оцінки потенціалу підприємства.

Наукова новизна. Полягає у включенні узагальнюючого показника соціальної складової потенціалу підприємства до визначення інтегрального показника оцінювання потенціалу підприємства.

Практична значимість. Запропонована методика дозволяє всесторонньо оцінити потенціал підприємства, оскільки поєднує дві оцінки – соціальну та економічну, зводить їх в єдиний інтегральний показник. Це забезпечує комплексний підхід до соціально-економічного оцінювання потенціалу підприємства, формує базу для прийняття управлінських рішень, допомагає обґрунтовано розподіляти ресурси. Практична реалізація методики дозволить впливати на поточний стан і тенденції розвитку підприємства, складати прогнози, плани розвитку та використання потенціалу підприємства.

Ключові слова: *потенціал підприємства, управління потенціалом підприємства, інтегральна оцінка потенціалу підприємства*

Цель. Разработка комплексного метода оценки потенциала предприятия.

Методика. Разработан методический подход к социально-экономической оценке потенциала предприятия, который, в отличие от существующих, позволяет всесторонне оценить потенциал предприятия, поскольку объединяет две оценки – социальную и экономическую, сводит их в единый интегральный показатель. Результаты исследования получены за счет использования таких методов: систематизация и обобщение – для определения сущности понятия "социально-экономический потенциал предприятия" и классификации его составляющих; построение интегральных показателей для расчета интегрального показателя оценки потенциала предприятия.

Результаты. Поскольку все больше предприятий начинают конкурировать на международных рынках, эффективное использование потенциала предприятия является важным направлением управления для того, чтобы улучшить результаты деятельности. В работе разъяснена сущность социально-экономического потенциала предприятия и выделены основные его составляющие. Предложено осуществлять комплексную оценку потенциала предприятия с учетом двух его составляющих – экономической и социальной. Разработан методический подход к интегральной оценке потенциала предприятия.

Научная новизна. Научная новизна заключается во включении обобщающего показателя социальной составляющей потенциала предприятия в определение интегрального показателя оценки потенциала предприятия.

Практическая значимость. Предложенная методика позволяет всесторонне оценить потенциал

предприятия, поскольку объединяет две оценки – социальную и экономическую, сводит их в единый интегральный показатель. Это обеспечивает комплексный подход к социально-экономической оценке потенциала предприятия, формирует базу для принятия управленческих решений, помогает обоснованно распределять ресурсы. Практическая реализация методики позволит влиять на текущее состояние и тенденции развития предприятия, составлять прогнозы, планы развития и использования потенциала предприятия.

Ключевые слова: *потенциал предприятия, управление потенциалом предприятия, интегральная оценка потенциала предприятия*

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QUALITY MANAGEMENT OF EDUCATIONAL INSTITUTIONS IN PROTECTING STUDENTS' HEALTH: CONCEPTUAL AND STRUCTURAL-FUNCTIONAL INNOVATIONS

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УПРАВЛІННЯ ЯКІСТЮ ЗДОРОВ'ЯЗБЕРІГАЮЧОЇ ДІЯЛЬНОСТІ ОСВІТНІХ ОРГАНІЗАЦІЙ: КОНЦЕПТУАЛЬНІ ТА СТРУКТУРНО-ФУНКЦІОНАЛЬНІ ІННОВАЦІЇ

Purpose. The research aims to support quality assurance concepts of educational institutions in protecting the health of students and in developing of a strategic framework for its management, based on the provisions of the ISO standards.

Methodology. The authors used theoretical methods such as historical and logical, comparative, analytical methods, systems analysis, modeling and forecasting. Empirical methods included the study and generalization of pedagogical experience.

Findings. Conceptual provisions of quality assurance of the work of educational institutions for the protection of students' health are developed, presented in the form of objectives and management principles. The implementation of the selected quality management principles in the study of students' health necessitates the allocation of internal reserves of educational organizations for the creation of the health services department. The health service provides for the implementation of the key actions aimed at the promotion of students' health and includes in its structure a number of specialized units (medical, sanitary, hygienic; valeological, pedagogical; sports and recreation; psychological and pedagogical; monitoring). The work of the units is focused on the appropriate course of actions, their specificity in the description that most closely represents all aspects of students' health the interdepartmental social partnership. The head of the service and each of its staff members has appropriate powers and responsibilities. Despite the shared aims of the units' functions (diagnostic, prognostic; informational, advisory; scientific coordination), the spheres of competence of various specialists involved in health protection activities are separated within the service, while maintaining the common strategic direction.

Originality. The concept of "the quality of the work of educational institutions for students' health protection" is clarified. It is understood as the organization's ability to perform at the required level of its responsibility for the preservation and promotion of the health of students. The concepts of quality assurance of activities of educational institutions aimed at students' health protection are developed along with the strategic guidance on the management of quality. A structural and functional health service model is proposed. The research provides methodological and conceptual foundations for the development of quality management of educational institutions in their work aimed at students' health protection to solve important methodological, theoretical and practical problems.

Practical value. The results of the research can be used in the educational practice to ensure the quality of work of educational institutions aimed at the protection of students' health.

Keywords: *the quality of work of educational institutions in students' health protection, ISO standards, quality management, principles of quality management of educational institutions working for students' health protection, structural-functional model of the health service*

Statement of the problem and analysis of the latest achievements. Along with the modern requirements regarding the improvement of the quality of education (these requirements are laid out in most legal documents of the Ministry of Education and Science of the Russian Federation), one of the most important requirements for educational in-

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