

# Challenges and Prospects of Management of Quality of Educational Services in Russian Technical University

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**Abstract**—The paper provides a detailed analysis of the concept of "quality of educational services", discusses promising methods and techniques used to evaluate educational services, analyzes the impact of social and economic factors on the structure of education. The management of the quality of educational services is currently acquiring distinctive features and becomes a priority in the programs aimed to reform the system of higher technical education in Russia, since continuous improvement of its quality indicators in current conditions is the key to competitiveness of a university.

**Keywords**—*quality of education, educational services, quality management system, assessment system*

## I. INTRODUCTION

World experience of civilization development in the XX century showed the crucial role of the educational sphere in the formation of the entire socio-cultural complex: production modernization; improvement of social relations, science and culture ensuring the sustainable development of society. In the XXI century, the role of education for all countries is increasing even more, being a decisive factor in the country's competitiveness on the world stage. The beginning of the 2000s included the development of the concept of modernization of Russian education, including changing the priorities of state policy, giving education the paramount importance, implementation of structural adjustment, changing the organization and management of the entire educational process.

During the transition to a two-level system of training in the Federal State Educational Standards of Higher Vocational Education, for the first time the requirements were set not for the obligatory minimum of educational content, but for the results of the acquisition of the principal educational program expressed in the form of competencies. The introduction of a competence-based approach to training involves clarifying the content of the theoretical and practical parts of the principal educational program, ensuring that students master all the components of competencies (general cultural, general scientific, professional ones) necessary for the full realization of an individual in the profession.

It is generally recognized that the central figure in the pedagogical system is the teacher, who has to clearly realize the content of the future professional activity of a student, the role and place of their own discipline in the formation of the relevant competence of a specialist. Currently, there is an active

transition from traditional forms of teaching to the creation of new methods and organizational structures. These structures should contribute to the individualization of higher education and focusing on the demands of the market economy, as well as meet new qualification requirements for university graduates.

The concept of social progress has recently become the most important scientific precondition to address the issue of the quality of education. The researchers, who specialize in this field of knowledge, employ the approach that focuses not only on the study of classical heritage, but rather on the study of the pattern of human behavior oriented towards market methods used to regulate educational services.

It is not the first time when these aspects of educational activities of educational institutions are disputed due to recognition of the expediency of creating an attractive educational environment. This approach originates from a number of concepts that emerged in the public consciousness in the turn of the 19–20th centuries. These concepts include the idea of the predictable nature of progress, the idea of the beneficial effect of education on personal development, the idea of development of intellectual qualities of the individual as the key to formation of the market economy, the idea of the market as an engine of progress. Such aspects were treated in creating an extensive educational environment and maintaining its qualitative state, primarily in high school, however they often opposed the ideas of socialization of society as a whole. At the beginning of the twentieth century, a well-known German sociologist M. Weber marked domination of the idea of an educated person as a quality professional in Western society, where a stable stereotype of rationality had formed over the centuries. This position deserves attention, however, his studies can be productive and useful only within a specific profession. Thus, the problem of the quality of education and educational services gradually became an object of serious sociological research.

K. Mannheim shared his view on the quality of academic education. M. Weber stated the need to develop the concept of sociology of education mainly as a sociology of human economic behavior; however, Mannheim found the evidence of the activities of the academic elite, the genesis of conservative thinking, which sharply changed perception of the quality of education and competition environment. In his opinion, cultural and educational policies should be in strict accordance with the economic perspective, and the hopes of preserving democratic

principles in the era of "mass societies" should be associated with the technical intelligentsia [1, p. 412]. T. Veblen, who was not so much interested in the pressure on the educational process imposed by the state and the quality of educational services, but rather the growing influence of new social leaders: engineers, scientists, and businessmen seeking to raise higher knowledge to the level of the good and object of speculation.

## II. MATERIALS AND METHODS

The theoretical and methodological basis of the research includes the studies by Russian and foreign experts in the field of education quality and methods for evaluating educational processes and relationships. The study uses a modern understanding of the complex, systemic and holistic nature of university reforms that can markedly improve the quality of higher education and competitive quality standards in the Russian educational space.

General scientific methods used in the study include the system and structural analysis, correlation, comparison, generalization, analysis and synthesis. Special methods used involve the target procedure and comparative-historical method.

## III. RESULTS

In modern society, the need for a detailed quantitative and qualitative analysis of actual training of technical specialist, social design of an educational environment and management of the quality of educational services are regarded as a scientific challenge requiring considerable efforts to achieve intellectual consensus in modern society.

In Russian scientific literature, the concept of "quality" is most often used in economic discourse. At the same time, the quality of a product or service is regarded as the highest rating (excellence, supremacy); measurable and estimable product characteristics; compliance with the purpose (the ability to perform a given function); the conformity of the value of the goods or services (the cost-utility ratio). These aspects of the concept of quality in terms of the quality of education and educational services require immediate clarification and commentary [2, p. 93].

Several conceptual approaches currently used to assess the quality of education include two most informative principles. This is a *classic* (traditional) approach, when the quality of education and educational services is considered as compliance to a given norm and standard. The emphasis is on terms of standard formation and development of procedures for its measurement. In this case, the quality of education is governed by regulatory requirements, a system of state standards, licensing mechanisms, certification and accreditation, market mechanisms of demand for certain types of education and educational services, corporate mechanisms for managing educational processes (at the educational institution level).

The second *innovative* approach to the quality of education includes measurement of the humanitarian parameters of educational processes and their effects along with mandatory standardization procedures. Modern global processes that involve formation of the information society objectively determine the key role of science and higher education in

fulfilment of basic tasks of post-industrial modernization of Russia. It is well known that industrial civilization has given rise to great contradiction between the technological (technical and economic) and humanitarian foundations of society, which ultimately exacerbated the problem of multiple forms of human sociocultural alienation. It became obvious that this contradiction can be eliminated through humanization of modern technological culture, recognition and provision of the "human dimension" as the main criterion for society development. The very nature of modern technologies objectively requires strengthening of the role of the human factor, and a significantly increased level of social responsibility of the specialist who employs them in practice. Therefore, higher schools are assigned the tasks related to formation of a new type of personality (in particular, the personality of a specialist) that meets the requirements of a qualitatively new format of social reality [3, p. 72].

Thus, in this historical context, science and higher education are the basis of a gradually emerging innovative type of development. Its general cultural meaning implies an organic unity of the technological and humanitarian measurement of the progress of society. In turn, to reach these serious goals, the system of higher education objectively needs "most radical transformation and renewal, to which it has never been subjected" [4, p. 8]. Being objectively an instrument of the systemic transformation of society, the Russian higher school has undergone a deep and comprehensive reform over several decades. The formation of a post-industrial (information) civilization urgently require to form an actively-searching and creatively transformative potential of a person capable of solving global and regional problems. At the same time, a new project-practical model of higher education should synthesize cultural-historical and design-software approaches. This means that the university should, on the one hand, include the student in the tradition of history, philosophy, science and culture, and on the other, teach him to professionally adequately analyze and solve urgent problems.

The quality of education within these terms depends on the degree of compliance with the goals and outcomes of the educational process at educational institution level, and the degree of compliance of theoretical knowledge with its practical application in professional activities [5, p. 37].

It seems necessary to distinguish between the quality of processes and the quality of educational outcomes. If the outcomes are directly related to the goals of education, the quality of the processes depends on the means used to achieve the educational goals. Therefore, the quality perceived as the diversity of its properties in terms of education primarily depends on a set of educational goals and underlying values. Thus, the list of goals and values of education reflects our idea about its quality. The ultimate goals of education (the characteristics that determine "what to evaluate" in terms of the quality of education) is one of the constantly arising problems of pedagogy and sociology of education. *Relevance* is often distinguished as an integral and significant facet of education that determines its quality indicators, i.e. its simultaneous compliance with the current requirements of the development of society and current interests of the student. However, since

the effect of educational outcomes is delayed, the decision on its relevance is made with some delay [6, p. 149].

In our opinion, the most comprehensive interpretation of the quality of education implies: a) a balanced conformity of education (result, process and educational system) to various needs, requirements, and standards; b) a systemic set of hierarchically organized socially significant features (parameters and characteristics) of education, its content and mode. This interpretation of the quality of education is universal and can be applied to various educational systems.

It should be noted that management of the 21st century clearly illustrates that success of any organizational system depends not only on the rational scheme of its activities, but mainly on its flexibility and adaptability to constantly changing external and internal factors, and on the ability to perceive and implement innovations. Hence, the main and essential feature of effective functioning and development of the educational system is its focus on constant changes and renewal.

Since the beginning of the 2000s, many countries have experienced intensive reforms in the educational sector due to the social and economic need to increase the productivity and quality of labor of the personnel employed in higher professional education, and due to the need of improvement of educational services in general. Structural and management strategies were used to implement necessary changes, including: reduction of government expenditures on maintenance of educational institutions; reduction in the number of workers employed in higher education; partial privatization of the material and technical base of educational institutions; management of result-oriented educational processes; assessment of the quality of educational services; staff training. These strategies were designed to facilitate the efficiency in the educational sphere and responsibility for the final result, and to provide quality services at a reasonable price. This caused the need to assess the quality of educational services and the effectiveness of new mechanisms for the educational process organization.

It is obvious that the development of the concept of quality management of educational services in higher technical educational institutions should be based on a comprehensive analysis of business processes, which include a set of actions to produce services of a certain value to consumers. This analysis enables an audit of the economic, organizational and intellectual capabilities of an educational institution to improve the educational process, to implement innovative training technologies, and to monitor and control the quality of services at all stages of the educational process.

The quality management system can be applied both to the whole organization and to individual structural units and categories of workers bound by the contract. This system is characterized by clarity, conciseness and feasibility of the goals and objectives of the educational institution and its divisions; responsibility for the quality of the work performed even at the level of an employee; an efficient system of monitoring the quality of work of each employee, teacher, department and the educational institution as a whole. A number of educational institutions use this system to ensure quality services in the educational process, thus regulating and monitoring the quality

through a number of interrelated techniques that increase motivation and ensure adherence to educational standards [7, p. 147].

In this regard, a procedure for assessment of the qualitative aspects of educational institution activities and development of the evaluation system both at individual and institutional levels is of great importance for modeling managerial impact. At the same time, there are challenging opportunities to apply a matrix system in order to perform a logical analysis, which allows for a prompt comparative analysis of alternative evaluation options. Matrix of logical analysis enables visual identification of the major problems encountered during project implementation, and problem situations and ways to quickly solve complex educational problems. This method can be used to monitor the system of educational activity indicators in educational institutions and to develop criteria to assess the quality of services. The criteria may include demand for graduates of this educational institution, a niche in the educational market, the degree of scientific and methodological equipment employed in the educational process, financial support and staffing of production activities, creation of conditions for intensive reproduction of the competent educational environment, and computer tools and innovative technologies for educational assistance [8, p. 12].

Thus, many problems related to management of the quality of educational services in higher education could be successfully solved within the framework of the new management paradigm, which states: "Management exists for the sake of the results achieved by the institution in the external environment. Management must determine the results to be achieved; management must mobilize the resources of the organization to achieve the results. Management is designed so that any organization – a commercial enterprise, a university – has the opportunity to achieve the projected results in the external environment, outside the educational institution" [9, p. 124].

To date, there are three main approaches to quality assessment of education and educational services:

- assessment of the results of educational activities in an educational institution (*objectivist approach*);
- assessment of the features that show the present state of an educational institution (*relativistic approach*);
- assessment of the features that show the potential of an educational institution (*development approach*).

In the future, these approaches will complement each other and thus provide a comprehensive understanding of the problem under consideration.

According to the *objectivist approach*, the most important features for understanding the quality of educational services are the possibility of objective measurements and comparability of the evaluation results of the scientific potential of the faculty, the number of publications and citation index, specialized curricula, modern laboratory equipment, etc. This approach involves the analysis of quality based on the "input" and "output" of information about the educational system. The main indicators of the "input" are the qualification of teachers, the

degree of material and technical equipment available, the level of students' knowledge, etc. The indicators of the "output" include students' ranking, demand for graduates, the opportunity of further education, etc.

The essence of the *relativistic approach* implies setting the goals of the management of professional education, their diversity, focus and hierarchy. The relativistic approach is employed to assess by the criterion of "goal compliance".

It should be noted that the relativistic and objectivistic approaches refer to the procedures of external assessment of the quality of educational services, while the *development approach* is focused primarily on internal assessment of the activities of higher education institutions (teaching staff and students enrolled), which does not exclude external quality assessment. At the same time, the development approach is focused on enhancement of the educational process quality in the future, whereas other approaches assess past and present experience of a higher educational institution. The generalization of these approaches will allow the development of a comprehensive idea of the nature of quality and the criteria to assess the quality of activities and management in a higher educational institution.

At present, the ultimate goal of any organization is satisfaction of its customers. Profitability, competitiveness and the existence of the organization depends on the degree of customers' satisfaction. Therefore, the quality of education and educational services provided should be considered not only as an integral part of the educational institution management, but it should also include interaction with customers as active participants involved in quality management. The service quality is only partially provided by the organization; it is created through joint efforts of the organization and the customer. This is the key to success, relevance and competitiveness of the modern technical university [10, p. 43].

#### IV. CONCLUSION

Thus, the domestic and foreign experience of quality management of educational services accumulated over the past decade shows that separate, fragmentary, non-systemic university reforms and innovations are ineffective and often harmful in terms of the overall effectiveness of the higher education system. Only comprehensive, holistic and systemic

reforms can tangibly improve the quality of higher education and increase competitiveness of quality standards of a technical university in the Russian and global educational space of the 21st century.

The need for a detailed quantitative and qualitative analysis of the current quality of educational services in modern technical institutions and active social monitoring and design of the educational environment with regard to the latest innovative technologies is considered an important scientific problem that requires considerable efforts to achieve intellectual consensus. The necessary and significant changes can be successfully implemented only with active participation of highly professional managers proficient in management consulting methods. The purposeful use of these specialists is both a large-scale social task and an effective technology of "survival" and development of a technical university in a competitive environment of the market of educational services.

#### References

- [1] K. Manheim, "Diagnosis of modern times: war essays written by a sociologist," Moscow: Lawyer, 1994.
- [2] A.K. Baytenova, "System gives rise to quality," Quality Assurance of Professional Education: Collection of scientific papers, Moscow: UNITY-DANA, 2007.
- [3] V.A. Sadovnichiy, Ed. "Education that we can lose: Collection of scientific papers," Moscow: Moscow State University, 2002.
- [4] "Higher education in the 21st century: approaches and practical measures," Final report at the World Conference on Higher Education, Paris: UNESCO, October 5–9, 1998.
- [5] I.V. Palshina, "Need for introduction of quality management in an educational organization," Quality Assurance of Professional Education: Collection of scientific papers, Moscow: UNITY-DANA, 2007.
- [6] B.G. Ushakov, "Quality of education and/or quality education (problems of methodology, practice and assessment)," Management consulting, No. 3, 2008.
- [7] L.Yu. Sharabaeva, "Theoretical foundations and key technologies for building a university's knowledge management system," Management consulting, No. 2, 2008.
- [8] L.A. Mikhailov, "Key criteria for competence in education," Processes of modernization of Russian education: Proceedings of the 14th International Conference, St Petersburg: SZAGS, 2007.
- [9] A.K. Sokolovsky, "Features of building a quality management system for a design and construction enterprise," Innovations in science, education and production. Organization of Innovation: Proceedings of St. Petersburg State Technical University, No. 515, 2014.
- [10] E.M. Korotkov, "Management of education quality," Moscow: Lan, 2016.