#### **ABSTRACT**

of the thesis for the "Doctor of Philosophy" (PhD) degree in the «8D01101 – Pedagogy and psychology» specialty Atem Marzhan Nurlankyzy «Pedagogical basis of improving the quality of secondary education»

Relevance of the research topic. The quality of secondary education is one of the necessary qualimetric measurement categories for determining the success of productive education in today's global society. Due to the relevance and significance of secondary education, the students' interest in adapting to modern flexible skills, and their ability to concentrate on innovation, it is possible to evaluate students' level of knowledge using quantitative and qualitative indicators. Since high-quality school education aims to achieve long-term results that reflect the anticipated needs of a changing society, rather than the needs of the present, it must be able to quickly adapt to changes in the educational organization and structure of education management in order to achieve a new level of quality.

In recent years, the concept of "quality of education" has moved into the realm of state policy and has become the subject of public and scientific debates. The national project of the Republic of Kazakhstan for 2021-2025 titled "Quality Education "Educated Nation" entails improving the quality of education for students at all levels of education; improving the quality of secondary education; reducing the quality of education gap between regions of Kazakhstan, urban and rural schools (PISA), and providing schools with a comfortable, safe, and modern learning environment.

The problem of the quality of knowledge and their assessment are reflected in the works of such scientists as V.V. Kraevsky, I.Ya. Lerner, T.L. Kogan, N.G. Nikokosheva, A.I. Yakushev, S.E. Shishov, V.A. Kalney, M.M. Potashnik, Ya. Aaviksoo, L. Vlasceanu, L. Grunberg, D. Parle, M.V. Krulekht, A.M. Katz, P.I. Tretyakov, B.E. Fishman, T.I. Shamova, Yu.A. Konarzhevsky, D. Westerheijden, G.A. Bordovsky, K.G. Barbakova, V.V. Mayer, L.L. Mehrishvili, also in the works of such domestic scientists as A.K. Kusainov, M.Zh. Zhadrina et al. These scientists considered the quality of education as an integral character of educational activity and the results of general education and educational processes along with cognitive, socio-cultural components. Methodological aspects of the quality of knowledge in the research of Russian scientists are reflected in the works of V.S. Avanesov, Y.K. Babansky, N.F. Vinogradov, B.S. Gershunsky, V.I. Zagvyazinsky, N.V. Kuzmina, V.E. Medvedev, V.D. Shadrikov and other scientists. The characteristics of various aspects of the quality of education were highlighted in pedagogical studies by T.M. Davydenko, V.A. Kalney, V.N. Maximova, A.M. Moiseev, P.I. Pidkasisty, I.P. Podlasy, A.I. Subetto, etc.

Scientists P. Bordovsky, A.A. Nesterov, and S.Y. Trapitsyn studied the close relationship between the concepts of "quality" and "quality of education," defining the quality of the educational process as an integral property of the pedagogical system that determines the modern and potential abilities of the individual and society, and the capacity to meet state requirements for the training of highly qualified specialists.

Nevertheless, based on our observations, the scientific and pedagogical foundation for enhancing the quality of secondary education in the country requires expansion and new approaches.

The object of the research is the quality of secondary education in Kazakhstan.

**The subject of the research** is the process of improving the quality of secondary education through internal reserves.

The purpose of the research is to provide scientific and theoretical justification for enhancing the quality of education in the general secondary education system, as well as to develop and present mechanisms and models for evaluating the quality of education.

#### **Research tasks:**

- 1. To theoretical substantiate the improving the quality of secondary education in the system of general secondary education;
- 2. To determine the methodological approaches, mechanisms and quality components for enhancing the quality of secondary education through domestic and international experience;
- 3. To identify the pedagogical capabilities of internal reserves that influence the enhancement of the quality of secondary school education;
- 4. To develop a structural and procedural model for improving the quality of secondary education;
- 5. To test the improvement of quality of secondary education through experimental work and develop methodological recommendations.

The scientific hypothesis of the research: *if* the quality improvement of secondary education through internal reserves is theoretically justified in the secondary education system and its structural and procedural model is developed, *then* the quality improvement of general secondary education acquires a new measuring character, *as the* efficacy of the implemented structural and procedural model is scientifically proved and the results are experimentally tested.

The leading idea of the research is: the quality of professional qualifications of teaching staff; the quality of management; the quality of spiritual, moral and patriotic education; determining the results of the quality of secondary education through the educational achievements of experimental classes.

**Methods of research:** content analysis on the research problem, general methods of theoretical and pedagogical research - generalization, comparison, abstraction, etc., mathematical statistical methods, general methods of experimental pedagogical research (observation, questioning, testing, expert evaluation, etc.), applied methods of experimental research of the structural and procedural model of improving the quality of secondary education.

**Research base:** the experiment involved: in the 2018-2019 academic year, 18 schools, 1554 students, 138 teachers located in the Tolebi, Ordabasy districts of Turkestan region; in the 2019-2020 academic year, 43 schools, 3171 students, 385 teachers located in the Tolebi, Ordabasy, Sayram and Otrar districts of Turkestan region.

The scientific novelty consists in the following:

- 1. The process of improving the quality of secondary education through the systematic organization of internal reserves of the school is analyzed from a theoretical point of view;
- 2. Methodological approaches, mechanisms and quality components of improving the quality of general secondary education by comparative analysis of foreign experience are determined;
- 3. The practical effectiveness of the pedagogical capabilities of internal reserves influencing the improvement of the quality of secondary education in school is revealed;
- 4. The structural and procedural model of improving the quality of secondary education has been tested and developed in the course of experimental work:
- 5. The teaching aid "Triad in improving the quality of secondary education" has been prepared, describing the content of improving the quality of professional qualifications of teaching staff, the quality of spiritual, moral and patriotic education and the quality of management.

### The theoretical significance of the research:

- the theory of the quality of pedagogical science was supplemented with new definitions given to the concepts of "quality of education", "quality of secondary education";
- the domestic system of secondary education has been expanded with quality components obtained by comparative study of foreign experience;
- systematized factors affecting the improvement of the quality of secondary education;
- a structural and procedural model of improving the quality of secondary education has been compiled, its criteria and indicators have been determined.

The practical significance of the research allows to use the research experience gained with a positive result in improving the secondary education system in Kazakhstan, in developing new regulations and educational programs related to improving the quality of secondary education, organizing and conducting the educational process by employees of educational institutions, performing research to improve the quality of secondary education, organizing the effective use of internal reserves for high-quality performance of the secondary educational process.

## The main provisions submitted for protection:

1. Based on the scientific analysis of domestic and foreign resources, the following definitions were formulated: education is a way of transferring scientific knowledge, skills, attitude to the world through an appropriate educational institution; the main condition for the development of the culture of members of society; a continuous process of education and training, the purpose of which is to achieve a high level of moral, intellectual, cultural development of members of society and their physiological development, the development of professional qualifications; the process and result of mastering the volume of systematized knowledge, business skills and ways of thinking. *The quality of education* is the compliance of the educational process with the requirements of society and the

ability to meet the needs of the main subjects of education. The quality of knowledge is understood as the effective indicator of competencies and learning skills achieved by students in the learning process. The quality of secondary education is a complex characteristic of the education system, reflecting the level of conformity of the quality of school management, the system of organization of spiritual, moral and patriotic education, professional development of teaching staff to the needs of subjects of education.

- 2. In improving the quality of secondary education at school, the classification of quantitative results was guided by international studies that determine the rating of the quality of education (the results of the research of the Ceoworld journal and the PISA (Program for International Student Assessment) study). The state of the quality of secondary education in the world and Kazakhstan in international studies is determined on the basis of comparative analysis.
- 3. In the process of general secondary education, 8 components of the quality of the secondary education system have been identified through internal reserves for improving the quality of education. During the experimental work, the main attention was paid to 3 constituent parts. These are: the quality of professional qualifications of teaching staff; the quality of management; the quality of spiritual, moral and patriotic education. It is concluded that in improving the quality of secondary education, each of the components of the system should be of high quality.
- 4. The system of improving the quality of secondary education is implemented through a structural-procedural model consisting of structuralorganizational, substantive-procedural, methodological-reflexive blocks. The structural and organizational block consists of methodological foundations for improving the quality of secondary education, components, objects and subjects of improving the quality of education and educational outcomes, the content and procedural block provides for measures aimed at improving the quality of quality components that can be influenced through internal reserves, considers the activities of students to improve the quality of education and the organizational activities of the experimental pedagogical works. The third methodological and reflexive block includes an analysis of the experience of improving the quality of education, conducting experimental work and criteria and indicators of the quality of education. The developed model reflects the result of the implementation of a high-quality secondary educational process based on the scientific concept and the possibilities of using internal reserves in improving the quality of secondary education.
- 5. The experimental program, designed to improve the quality of secondary education, consists of the content of the work that contributes to achieving the quality of each of the components of the system. In the course of improving the quality of each system component, responsible entities and work plans have been approved. The experimental program provides for the achievement of improving the quality of secondary education through internal reserves.

The reliability and veracity of research results.

The reliability of the results obtained is ensured by the methodological justification of scientific theoretical recommendations and principles, the preservation of the logic of scientific research, the correct use of scientific apparatus, the analysis of a wide range of theoretical and practical sources that do not contradict world educational trends.

# Compliance of research with state programs and legislation.

The research is based on interrelated state programs and legislation, the National Project for 2021-2025 "Quality education" Educated Nation", the Law of the Republic of Kazakhstan "On Education", the Law "On the status of a teacher", the state mandatory standards of education at all levels of education, "Professional standard of a teacher", etc.

**Approbation and publication of research outcomes.** The main provisions, theoretical and practical results of the dissertation are presented at international scientific and practical conferences, reviewed and approved at a meeting of the Department of Pedagogy and Management of Education of the Al-Farabi Kazakh National University.

The main results of the research work have been published in 9 scientific papers: 1 article in the Scopus database, 4 articles in the collection of foreign international conferences, 3 articles in scientific publications recommended by the Committee for Quality Assurance in the Field of Science and Higher Education of the Ministry of Science and Higher Education of the Republic of Kazakhstan, 2 teaching aids.