

USE OF PEDAGOGICAL QUALIMETRY METHODS

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Abstract

Qualimetry studies the issues of assessing the quality of goods, services, and processes. The main methods of qualimetry in this process are: analysis, synthesis, comparison, and comparison. Based on the quality indicators of the model adopted as a standard, the quality of the object being evaluated is determined, taking into account its characteristics.

This article discusses the methods of applying quasimetric methods in the field of pedagogy.

Keywords: Qualimetry, method, pedagogy, creativity, creative thinking, creative tasks.

Introduction

Qualimetry is a scientific discipline that studies the problems and methodology of quantitatively assessing the quality of all objects in nature and all processes occurring in society, as well as products created in the field of production. Qualimetry (from Latin *qualis* - quality, ancient Greek *metros* - measurement) is a branch of science that encompasses methods for quantitatively assessing the quality of objects, products, and processes, and determining the results achieved using various methods and tools.

Qualimetry, as a science, studies the determination of the quality and quantity indicators of this object with the help of volume, unit, scale, requirements that determine the quality of the object to be studied and evaluated, based on the theory of implementation of the defined and accepted measurement process.

From the point of view of modern times, quality indicators of qualimetry are divided into two large groups: natural and social indicators. Natural indicators, in turn, are divided into: physical, chemical and biological quantitative indicators of the studied object.

1. Social indicators are applied to events, production and consumption products, pedagogical processes, position and place of a person in social and independent life, literacy, level of upbringing, personality maturity at a certain stage of the development of society.

Qualimetrics studies the quantitative and qualitative indicators of each of the above-mentioned groups as a whole and develops a general evaluation procedure. There are three branches of qualimetry: theoretical (general), special, and practical.

In theoretical qualimetry, a specific object is designed (abstracted) and general laws and mathematical models of its quality indicators are studied. The research object of theoretical qualimetry is the development of philosophical and methodological foundations of quantitative assessment of the quality of objects, production products, objects and subjects.



In the practical fields of theoretical qualimetry, the methodology and theoretical foundations of quality assessment of various objects and processes have a common feature.

Special qualimetry develops a precise methodology and mathematical model for assessing the quality of a specific object of various types and used for various purposes.

There are types of special qualimetrics, such as expert, probabilistic-statistical, index, qualimetric taxonomy.

Applied qualimetry is a field that develops the assessment of the quality of technology, production, human labor activities, various projects and processes.

Applied qualimetry is interconnected with other disciplines and has such branches as technical qualimetry, social qualimetry, pedagogical qualimetry, medical qualimetry, geological qualimetry and others.

In the era of a market economy, the competitiveness of products (goods, services, processes) is of decisive importance. In order for a particular product, service, process to be in demand, it must have such values as embodying certain characteristics, being expedient, and perfectly fulfilling the assigned tasks.

2. The presence of these characteristics in production products and processes allows for a quantitative assessment of their quality.

3. International experience has shown that in order to achieve high quality of products, services, processes, scientific, technical and organizational criteria should be developed that determine their quality.

The quality of a particular object or process, services, and processes is assessed by measuring them against the criteria of a model adopted as a standard and comparing the results obtained.

In short, qualimetry studies the issues of assessing the quality of objects, services, and processes. The main methods of qualimetry in this process are: analysis, synthesis, comparison, and comparison. Based on the quality indicators of the model adopted as a standard, its quality is determined, taking into account the characteristics of the object being assessed.

In pedagogical qualimetry, which is a practical branch of qualimetry, qualification requirements for personnel training are accepted as a standard, and the quality of professional qualifications and pedagogical skills of pedagogical personnel is determined by comparison. In the process of training competitive pedagogical personnel, it is necessary to plan the purposeful organization and management of this process, modernize the educational process, and provide methodological and technical support for this process.

Pedagogical qualimetry is a scientific and theoretical discipline that has emerged and been formed on the basis of accumulated experience and evidence over the years, and comprehensively studies pedagogical innovations used in the educational process and the pedagogical activity of the teacher in connection with it. Pedagogical qualimetry is a multifaceted pedagogical process and the pedagogical activity of the teacher in connection with it, and is considered the most important, but little-studied area of pedagogical sciences. It should be noted that pedagogical qualimetry determines the quality of the pedagogical process and the pedagogical activity of the teacher. The methodological problems of pedagogical qualimetry have so far remained outside the attention of scientific researchers, and the problems in this area are waiting for their solution. The analysis of the literature showed



that the methodological foundations of pedagogical qualimetry are directly related to the socio-economic development of society, the state and social orders placed before educational institutions, and the work carried out on its methodological foundations was developed on the basis of the logical unity of the society's socio-economic development.

The object of study of pedagogical qualimetry is the quality of the educational process, organized in an educational institution entrusted with state and social orders, organized to fulfill these orders, the quality of the organization and management of students' educational and cognitive activities, and the purposeful organization of the teacher's pedagogical activity. The history of the formation and development of pedagogical qualimetry as a discipline can be conditionally divided into three periods:

1. Its development in antiquity and the Middle Ages, that is, the period of not yet scientifically substantiated, empirical development.
2. The period from the 16th century to the end of the 19th century, the period when the first ideas about the quality of the educational process appeared.
3. The new and newest period of development of pedagogical qualimetry, that is, the period of scientifically substantiated, methodological foundations determined, scientific measurement parameters with theoretical, special and practical branches.

In dividing the development of pedagogical quality into these periods, the impact of the development of society, religion, and science on the educational process, as well as the organization of education based on the paradigms of religious education, religious-secular education, and secular education are provided.

Each educational paradigm has scientific-theoretical knowledge, the goals and tasks of the educational process, and the standards for evaluating the results of the students' educational activities. The main task of educational institutions during the period of development in antiquity and the Middle Ages, that is, not yet scientifically based, empirical development, was to convey knowledge of philosophical and religious content to the minds of students. The main focus is on stabilizing the society, making the members of the society religiously literate.

In that period, the process of formation of higher educational institutions had to begin, and the study of 7 art directions was started in those educational institutions.

The study of this art direction prepared the ground for the emergence of spiritual-ethical, mental, physical development, aesthetic taste, ecological views of the members of the society. Since the educational goals of educational institutions of that time were to ensure the intellectual and physical development of students and to develop logical thinking skills, in the process of education, students not only mastered knowledge, but also identified problems, analyzed, synthesized, compared, compared, generalized, and concluded in problematic situations created during the teaching process. It is intended to perform mental operations such as making. The knowledge acquired by the students was monitored and evaluated through oral questions and answers and conversations.

Since the final result of the educational process was not achieved by monitoring through oral questions and answers and conversations, the monitoring was comprehensive and purposeful. There was a need to develop forms and tools.



In the period from the 16th century to the end of the 19th century, when the first ideas about the quality of the educational process appeared, certain studies were conducted on the final result of the educational process and the assessment of the pedagogical activity of teachers, but these studies did not yield the desired results.

In the work of the famous teacher Y.A. Comenius "Great Didactics", the main didactic categories, the purpose of education, the content of education, the control of knowledge, the determination of the quality of the educational process were didactically justified. The scientist introduced new terms and concepts into the discipline of pedagogy, such as "control and assessment of knowledge", "exam", "collegium", "dictation".

As is known, the final result of the educational process is based on the knowledge, skills and qualifications acquired by students. In order to increase the quality of training of highly qualified and competitive personnel of an educational institution, a five-point assessment system was introduced. The new and most recent period of development of pedagogical qualimetry. At the beginning of the 20th century, educational institutions adopted a pragmatic position, that is, they controlled and assessed the knowledge, skills and qualifications acquired by students, and subsequently competencies. At that time, the ideological and political orientation of the content of education in Russian educational institutions was emphasized, a theoretical system was established based on the coherence of education and upbringing, and the control of theoretically reproductive knowledge, skills and qualifications and the formation of a comprehensively developed person as the final result of education and upbringing was envisaged.

In the most recent period of development of pedagogical qualimetry, a paradigm of education focused on the personality of students appeared.

The theory of purposeful organization of the educational process based on universal human values, humanized pedagogical relations, taking into account the interests, needs, internal and external learning motives of the student is based on the personality of the individual. On the basis of this paradigm, positive changes were brought about in the pedagogical quality, as well as in the educational system.

Among them: the transition from the frontal educational process based on the socialization and adaptation of the person dominating the educational system to the process that prepares the ground for the individual development of the person, which enables the realization of educational goals;

- Refuse to arm students with scientific knowledge and focus on the formation of theoretical knowledge, practical skills and qualifications based on universal, universal human values;
- In addition to compulsory forms of education, direct students to independent learning and independent training;
- In the formation of knowledge, skills and qualifications, creative activity experience and values in the content of education, move to the use of an integrated content, interdisciplinary connection, and a system of modules, not based on theoretical issues of training courses;
- Use innovative and information technologies that, along with reproductive methods and traditional technologies of teaching, allow students to develop creative, critical and logical thinking skills;



• In the control and evaluation of the final result of the educational process, abandoning the paradigm of knowledge, skills and competences, the need to determine the level of development and upbringing of a person through the control of competences, which is accepted as a perspective direction of the modernization of the educational system. shows the effect.

Pedagogical qualimetry as a science has the following conceptual foundations: 1. Pedagogical qualimetry allows to determine the quality of the educational process organized at various stages of the continuous education system, the level and quality of students' mastery, the level of professional qualifications of pedagogical personnel and make a general conclusion.

2. Pedagogical qualimetry perceives the quality indicator of the object under study as a dynamic category and assumes an increase in the level of this quality indicator in the future, based on state and social requirements set for the continuous education system, in line with the times.

3. Pedagogical qualimetry is formed and develops as a discipline based on the achievements of two interconnected and interrelated areas: theoretical qualimetry and practical qualimetry.

Pedagogical qualimetry monitors and evaluates the compliance of the level of preparation of future pedagogical personnel for pedagogical activity with the qualification requirements, the professional qualifications of teachers engaged in pedagogical activity in the continuous education system, the quality of the educational process organized at this stage, the compliance of the knowledge, skills and qualifications acquired by students, professional competence (competence) with the knowledge, skills and qualifications regulated by the State Educational Standards, the quality of pedagogical personnel training in higher educational institutions, including existing departments, and the quality of material and didactic support of courses included in the curriculum, based on a rating in accordance with the established procedure.

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