PSYCHOLOGICAL AND PEDAGOGICAL FACTORS IN IMPROVING THE QUALITY OF EDUCATION

Shoira Kh. Abdullaeva
Doctor of Science, Professor,
Tashkent State University of Oriental Studies, Uzbekistan

Aziza A. Shayusupova
Candidate of Pedagogical Science, Associate Professor,
Tashkent State University of Oriental Studies, Uzbekistan

Khazrat H. Jabborov
PhD, Associate Professor,
Tashkent State University of Oriental Studies, Uzbekistan

Sayyora R. Kamalova
Senior Lecturer,
Tashkent State University of Oriental Studies, Uzbekistan

Dilafruz B. Botirova
Senior Lecturer,
Tashkent State University of Oriental Studies, Uzbekistan

Abstract: This article discusses the psychological and pedagogical factors in improving the quality of education. Thus, the condition for the training of high-quality specialists is the availability of a material base. This is especially important when it comes to organizing education at various levels: bachelor, specialist, master. At the same time, the value orientations acquired by undergraduates in the course of research activities, their emotional attitude to research work are evaluated. Consider the psychological and pedagogical conditions as a system of interrelated measures that contribute to successful mastery of undergraduate research competencies in research activities.

Keywords: psychological factors, pedagogical factors, quality of education, components, cognitive tasks, cognitive activity, orientations, studying, making decisions, evaluating.

Introduction

Education in the Uzbekistan is a purposeful process of upbringing and education in the interests of a person, society, state, accompanied by a statement of the achievement by a citizen (student) of educational levels (educational qualifications) established by the state.

Education is the most important subsystem of the social sphere of our state, which ensures the acquisition of systematized knowledge, skills and abilities with the further goal of applying them in professional activities.

The main task of universities is to provide high quality education. This task can be realized only if favorable conditions are created for this, such as the development of modern material, technical, information and human resources. To achieve this goal, equipped classrooms, electronic and printed teaching aids, demonstration and laboratory equipment, interactive and multimedia complexes are needed to ensure high quality education. Thus, the condition for the training of high-quality specialists is the availability of a material base. This is especially important when it comes to organizing education at various levels: bachelor, specialist, master.

The main findings and results

The quality of education at the present stage is the main competitive advantage of educational institutions along with the price. The quality of education is a combination of consumer properties of educational services that provide the ability to meet the needs of the student in the comprehensive development of the individual.
The formation of special conditions in educational practice is due to the need for its adjustment and is associated with psychological, implying the study of the internal characteristics of the individual with the aim of directly influencing them, and pedagogical aspects, implying the discovery and creation of conditions that ensure the effectiveness of actions. Consider the psychological and pedagogical conditions as a system of interrelated measures that contribute to successful mastery of undergraduate research competencies in research activities. In our opinion, it is advisable to single out three main groups of psychological and pedagogical conditions that help in solving the main educational tasks:

- technological conditions that determine the forms, techniques, methods, means, methods, stages of the organization of the educational process, representing the procedural and methodological basis of the pedagogical process;
- information conditions, including the content of education, representing the cognitive basis of the pedagogical process;
- personal conditions that focus on behavior, communication, activities, individual qualities of the subjects of the educational process, representing the psychological basis of the educational process.

At the same time, technological and information conditions directly determine the educational process, and personal conditions determine the basis for the effective functioning of this process.

Thus, based on the fact that research competence is detailed in the formulations as a complex of interrelated personality characteristics containing such parameters and properties as strong motivation and high moral and ethical values; scientific, methodological and legal knowledge; personal qualities (perseverance, endurance, responsibility, etc.); research skills and abilities (cognitive, subject, technological, communicative, organizational, design, creative) allow us to identify the structural components of the research competence of undergraduates: motivational-value, analytical-activity and organizational-creative.

The motivational-value component is manifested in manifestation of motivational-value and emotional-volitional relations of undergraduates to the world around them, reality, people, themselves and personal abilities. These components determine the need for research work, the ability to overcome cognitive tasks, cognitive activity, independence in the process of studying, making decisions and evaluating them. At the same time, the value orientations acquired by undergraduates in the course of research activities, their emotional attitude to research work are evaluated. Implementation of the motivational-value component provides undergraduates with mastering the experience of independently solving research problems, which is especially evident in the process of involving undergraduates in a business game, where the teacher acts as a consultant, supervising the work of undergraduates only at essential moments of the game, indicating areas of activity. Based on the experience of conducting business games with undergraduates of the Institute of Finance, Economics and Management of Togliatti State University, we can say that at first, undergraduates, faced with the need for independent selection of scientific literature and individual work on the interpretation and substantiation of the data obtained in the study, they planned their work at a pace convenient for them.

But, the setting by the teacher of strict deadlines for completing the task, non-compliance with which serves underestimation, leads to the discipline of undergraduates in the independent planning of their work and determining the pace of achieving the effectiveness of the work, actualizing their volitional qualities and giving personal significance to research activities. At this stage, an important result of the undergraduate is the transition of the external need to find a solution to the research problem to the internal one.

The basis of social mobility and further reduction of socio-economic differentiation in society is the provision of quality education for the entire population of our country. So, for example, an applicant initially very carefully approaches the issue of choosing a higher educational institution, since, having received a quality education and becoming an educated specialist in a certain field of activity, he/she will be able to realize himself/herself in professional activities, because it is the high quality of professional education that is manifested in the level of demand for graduates vocational education institutions in the labor market.

The teaching staff plays a key role in improving the quality of education. Only a teacher who is constantly improving in his activities, with a high level of qualification, professional and intellectual levels will be able to transfer knowledge to students.

The intellectually active potential of teachers inevitably correlates with their scientific activity, since outside of the teacher is doomed to read “foreign” textbooks and present them more or less skillfully to students.

Pedagogical activity requires constant development and a radical increase in the actual complex status of the teacher, thereby transforming those who are formed and forming into a class, that is, increasing the value of education. Only by creating all the necessary conditions for teachers, we can talk about increasing the value of education in general. To improve the quality of education in higher educational institutions, it is necessary to take into account the following parameters, such as the quality of programs, the quality of the teaching staff (age, pedagogical activity, regular professional development), information support, quality of computer networks, logistics, premises for the practical application of the acquired knowledge, laboratory equipment, special audiences and the quality of scientific work, as well as an important component is constant monitoring, which can include sociological research on the achievement of all conditions for the provision of high-quality education by a higher educational institution. So, the main indicator of the results achieved in the future may be a survey of teachers and students (students, undergraduates, graduate students, and young scientists).

The main progress in the field of improving the quality of education can be provided by quality management in this area, which will allow competent management of higher educational institutions in our country and improve the quality of education. Education quality management has the following capabilities:

- building assessments based on the implementation of the basic principles of quality management, including “customer orientation”;

Copyrights @Kalahari Journals
International Journal of Mechanical Engineering Vol.7 No.2 (February, 2022) 1839
– to evaluate on a systematic basis in the monitoring mode;
– develop systems for assessing teaching based on a competency-based approach;
– to develop a model of an intra-university teacher remuneration system based on incentive bonuses for the quality of work, etc.

Due to the above possibilities, which can be used to assess the quality of education in higher educational institutions, it is possible to raise the level of higher education in our country, bringing it closer to the world. Uzbekistan higher education has the potential to take the lead position in providing world-class higher education.

Recently, more and more pragmatic emphasis has been placed on the introduction of old achievements of theories in order to make a profit as soon as possible. Unfortunately, this is observed at all levels of government. However, the exhaustion of theory resources without replenishment and the corresponding short-sighted plans are fraught with grave consequences that we are already facing now when we need to manage very complex and globally distributed systems. It is possible to get out of the unfavorable situations of the development of the world and its components only on the basis of fundamental new discoveries. And for this, specialists who own the whole range of fundamental knowledge are needed. The future of science and the world lies in the possession of complex abstract concepts of a very high level.

At present, society lives in a steady trend towards a post-industrial society on a global scale (globalization). All systems have become much more complex. Powerful amplifiers of energy and information processes have appeared (for example, a small group of people can terrorize the whole world). “All the structures existing in the world are supported (preserved) while and insofar as they are supported (preserved) by the feedback controllers corresponding to them, while the observed fluctuations (inherent in all quantities) are nothing but errors in this regulation.” It is required to take into account the relationship of post-industrialization, globalization, civilization, culture, education, upbringing. At present, people have a lot of free time and opportunities for their use, not always for the good and not with good intentions. There is a big problem of culture and education of children. It is necessary to clearly understand the meaning of these and additional concepts to them: civilization and education. Civilization is defined as the sum of knowledge, production technologies, including crafts and arts, science.

Obviously, education cannot be separated from everything else. The quality of training, education and creativity from the standpoint of optimization cannot be considered without their unity. Improving the quality of education is possible only through the use of systemic methodologies. It is no coincidence that V. Utkin noted: “… elements of aesthetics are inherent not only in art, but are easily found in many chapters of such a well-formalized science as mathematics”. And further: “… any mathematical knowledge begins with a set of axioms… like seven notes of an octave in music. And then - like a melody of seven notes - a new building of mathematical knowledge is erected from axioms. Especially sounded “a call for non-trivial independent thinking, which is absolutely necessary for scientific work”. Reminds me of Einstein’s words: “Education is what remains in your head after you forget what you learned at the university”.

The goals of science: to explain the phenomena of the world around us, to discover new phenomena, to develop theories that can be directly used by people to develop new theories, for future practical activities. In other words, to make absolutely clear what was obscure and unknown and present the results of research in the form of well-formalized knowledge. Perhaps for scientists, as well as for creative workers, the process of scientific research and creativity is a vital need, but only scientists always know what this or that search is for; for creative workers, the question “For what?” - secondary. The goal of scientists is to achieve maximum likelihood between scientific results and real phenomena. The complete identity of a work of art of real life would cause a feeling of disappointment, like a photograph for a document. There is an approximate (possibly very inaccurate) approximation: logic is for science, emotions are for art. The scientist works with models of the real world or creates these models.

Unfortunately, there is a significant deterioration in the staffing of science, industry and other areas. Half-measures can hardly eliminate the main cause of the crisis - the extremely low payment for fundamental research, the decline in their prestige, which do not stimulate the influx of young specialists and contribute to the outflow of productive specialists, scientists from the relevant fields of activity. These problems cannot be resolved by isolated efforts; coordinated collective actions are needed to optimize the entire structure and activities of the educational system. The main task is to adapt the education system to the conditions of the existing and future market environment while maintaining existing achievements. Thus, it is known that the training cycle of a professional from a young specialist within a certain scientific school (the presence of a school is obligatory) is from 7 to 12 years. The most acute problem is the sharp decrease in the number of young specialists wishing to engage in theoretical research. There is practically no generation of 30-year-old highly qualified specialists in the staffing of the theoretical level. There is a great danger that the current generation of 50-60-year-old scientists will leave fundamental science without having time to prepare a worthy replacement.

Without touching on many other issues of quality improvement, let’s consider some of the existing approaches to assessing and creating an education quality system. When studying almost any system, an important stage is the identification of its main components - the organizational structure (actually established, and not normative - according to the organization’s regulations, staffing, etc.), operating procedures, incentive methods, etc. Significant and complex dynamics, non-transparent relationships in the team do not allow obtaining objective data about the system under study with the possibility of using formal methods for modeling and identification. Expert information becomes the main one. The concept and methods of multivariate collective expertise have been most fully developed: the methodology for forming expert commissions (forming a list of candidates for experts; identifying significantly different points of view and classifying experts, as well as groups of non-conflicting experts; assessing their conditional competence; forming expert commissions); working methods of expert commissions. This methodology has been widely tested in healthcare systems, regional passenger transport, interbudgetary relations between the
With a systematic management of the quality of training specialists in universities, the priority is the demand for their graduates in the labor market. Naturally, educational services must meet modern needs in the field of future activities of graduates in their chosen specialty. They must meet the requirements of both the student and the consumer of the graduate and comply with the State educational standards; not contradict the current legislation and other norms of modern society. The prices of educational services must be competitive and provide a profit for their own development. The Penza State University of Architecture and Construction does not stand aside from the development of quality systems in the educational environment. For a number of years, a system of rating evaluation of the activities of the faculty of departments, faculties, and institutes has been operating here. It allows you to evaluate the contribution of each teacher and structural unit to improving the rating of the university and improving the quality of education in general. When choosing weight constants, the destruction of staffing in the country in many scientific areas was also taken into account, due to insufficient funding for fundamental research, as well as the need to train highly qualified specialists, especially highly qualified ones. The developed system has been tested for many years, the effectiveness and prospects of its use have been confirmed. Simultaneously with this system, a method of point-module-rating assessment of students’ knowledge was developed (it forms the student’s readiness for self-education). Here, the material of the discipline is divided into modules and it is provided for checking the assimilation of each module. A broad scale for assessing knowledge (100 points is assumed) can be used. Teachers have the right to freely choose teaching methods. There is an opportunity to participate in the formation of the budget in the structural divisions of the university.

Naturally, in order to work within the framework of the point-module-rating system for assessing learning outcomes for each direction (specialty), it is required to develop:

- programs for each discipline (indicate the labor intensity in credits; the objectives of mastering this discipline; the conditions for scoring (a list of general and special competencies));
- materials for classroom work in each discipline (texts of lectures, including in electronic form, programs and plans for seminars, multimedia support for classroom studies, handouts);
- materials for independent work of students (sets of homework texts, self-control materials for each discipline, typical models of abstracts, term papers, essays and criteria for their evaluation);
- educational electronic materials in the electronic library of the university;
- materials for knowledge control (written control tasks, written and electronic tests, examination tickets for each discipline);
-- materials for work in practices (plans and programs for conducting practices, forms of reporting documentation).

It is assumed that the university will adopt a multi-level control system (current, final level; written, oral, automated, and other forms).

The experience of using the point-module-rating system in Uzbekistan higher education and abroad shows that its introduction finds a positive response from students. They, even without the practice of learning in these conditions, as a rule, quickly adapt to it. It is more difficult with the teaching staff: the introduction of a point-module-rating system requires a radical change in the individual methods of work of teachers. In addition, with the transition of the university to such a system of education, the number of control measures increases sharply (the load on teachers increases). To motivate teaching staff in order to avoid a decline in the quality of education, a corresponding increase in wages is required.

Approbation of the system during the study of the mathematics course confirmed its effectiveness (the authors developed a complete set of educational and methodological documentation for organizing the educational process according to the point-module-rating system for the mathematics course, including tests for modules and the entire course).

There is no doubt that only a systematic approach to ensuring the quality of training of specialists will allow reaching the level of educational services required by the international community.

Modern trends in the economic development of society have determined the social order of higher education for the high quality of professional training of graduates, one of the indicators of which is creative activity, which largely contributes to their competitiveness and active adaptation in the labor market.

Today, the effectiveness of the educational process at a university is unthinkable without the development of the creative potential of students, understood as the acquisition of the necessary skills of creative activity by them and manifested in finding and substantiating a non-stereotypical solution to the tasks set. For a full disclosure of the problem posed, which is multidimensional in its content, we will define the relationship between the concepts: creativity, creative activity, creative abilities and creative activity. The result of creativity is the creation of original, unique values, the establishment of new facts, properties, patterns, as well as methods of research and transformation. This form of human activity is aimed at creating qualitatively new values for him that are of social importance. Such activity is significant for the formation of personality as a social subject.

In the psychological and pedagogical literature, the problem of the development of creative abilities is often spoken of. It should be noted that abilities refer to the most essential mental properties of an individual. Most psychologists who study the problem of abilities correlate abilities and skills in a certain type of activity and believe that the concept of “ability” comes from the characteristics of the person who performs this activity.
At the same time, the works of the above-mentioned researchers state that creative abilities can be developed and that in the process of mastering knowledge and skills, the personality develops, including in the direction of its preparation for activities at the level of creativity. According to S. L. Rubinstein, only through knowledge and skills are formed abilities. In the scientific literature, the following characteristics of creative abilities are distinguished:

1) the ability to “see” the problem as the most important quality that determines the consistency of the practical-cognitive process;
2) originality of thinking, revealed in the ability to look at an object in an unconventional way, to see it in a new light;
3) dialectical thinking as the most important integral characteristic of the creative style of activity;

Creative activity is understood by us as a state of the individual, which is characterized by the desire to acquire new knowledge and methods of activity, intellectual tension and the manifestation of volitional efforts in the process of this activity.

The problem of creative activity in psychology was studied by psychologists and educators, whose generalization of opinions made it possible to determine what was common in these opinions. Creative activity is motivated by an internal need for new knowledge and transformative activity and is characterized by:

1) strong motivation and resilience;
2) goal setting based on the vision of the problem and ways to solve it;
3) the thought process requires a significant transformation or rejection of previously accepted ideas;
4) the product of this activity has novelty and value.

When building the learning process for undergraduates, contributing to the formation of research competence, it is advisable to focus on the principles of organizational and creative approach. At this stage, it is planned to develop the content of the formation of the research competence of undergraduates, taking into account the knowledge and skills required for research work, which allows the most effective organization of the process of forming research competence by including the undergraduate in research activities, which provides an opportunity for the undergraduate to master the full base of research skills and practical skills.

The components in their complexity allow us to say that the research competence of undergraduates is an integrative quality of a person, in which the content is manifested through the ability and desire to solve research problems, individual adoption of research skills for the implementation of professional activities, possession research organization methodology.

The effectiveness of the formation of research students’ competencies depends directly on their professionally significant qualities: motivational and value attitude to research and professional activity, creative and reflective abilities. The formation of these personal qualities can be ensured by a targeted step-by-step activities of teaching staff aimed at the formation of research competence.

In the independent research work of a master student, control by the teacher is especially important, creating conditions for feedback, ensuring the regulation of the research work of a master student, timely changes in the forms and methods of its organization.

The formation of the research competence of undergraduates, first of all, is associated with the knowledge of the skills of research activity, the basis of which is the idea of activity. The development of research competence involves the support of undergraduates in learning the ways of self-acquisition of knowledge, so how the concepts of “self-education” and “research competence” are closely interconnected and represent complementary components of an integral system.

The priority direction for the formation of research competence of undergraduates in the learning process is properly organized research work, which implies participation in scientific seminars, conferences, writing scientific articles, etc. the teacher plays a vital role in helping the undergraduate to discover the research potential.

The implementation of pedagogical assistance in the formation of research competence is possible under the condition of properly organized pedagogical interaction. At present, scientific approaches are being updated in the educational sphere, requiring the teacher to constantly develop his/her scientific potential, maintaining professional authority at a high level.

The research orientation of a teacher is a total indicator of a person's ability for creative pedagogical activity, as it is connected with a high level of communicative, design and gnostic abilities that help in formulating and creatively solving research problems. The gnostic functions of a teacher are based on his/her ability to carry out search activities, to master and apply various innovations in the educational process, to systematize the necessary scientific material, including the experience of personal research.

The research orientation of the teacher lies in the possession of the methodology of scientific creativity, which helps to determine the methods of scientific research, focusing on the most appropriate goals. In the totality of the teacher's knowledge, necessary for him for research activities, a special role is played by the formation and implementation of new teaching technologies, the development of research programs, and the identification of priority areas in the development of pedagogical technologies.

Involving undergraduates in research work, the teacher needs to interest them in the problem and the research process, pushing them to think with the help of correctly formulated questions, acting as an accomplice and organizer of activities, therefore, research work is perceived by undergraduates as personally significant, increasing the importance of self-education, that is, pedagogical activity is built on the basis of accepting the individuality and personality of the undergraduate.
An important component of the effective implementation of the pedagogical conditions for the formation of research competence is the program of scientific research work of undergraduates, provided that the purpose, content, tasks and methods of its organization are aimed at the formation of research competencies of the undergraduate, taking into account the system for checking their formation.

To the most important components of pedagogical conditions include the educational environment of a higher educational institution, which includes:

1. The authority of the university, that is, its place in the ranking of higher educational institutions in Uzbekistan. It is no secret that the employer makes a choice in favor of employees with diplomas from popular, reputable universities.
2. Equipment with appropriate educational and scientific equipment for scientific research work. A master student who has received an individual task to perform research work implements it under the guidance of a supervisor, taking into account the individual qualities and interests of the master student, controlling and planning his/her work, implementing a student-centered approach. As they master the acquired knowledge and gain experience, the undergraduate is allowed from simple to more complex equipment, which allows obtaining scientific results.
3. Highly professional teaching staff. More than 60% of the teaching staff who need to take refresher courses should have Ph.D. or Ph.D. degrees.
4. The reality of obtaining professional and research skills during internships at Russian and foreign enterprises and research institutes.

**Conclusion**

The functioning of feedback between the participants in the educational process and the external environment is a prerequisite for organizing pedagogical conditions in a higher educational institution, since feedback is a connecting component in the process of implementing and testing the formation of competencies, and they are interconnected. Based on the foregoing, we can present the following logically based principles for the formation of research competence in a higher educational institution: motivation for the cognitive activity of students; replenishment of the learning process with research forms of work; interaction with the supervisor, control of independent work; attendance by students of special seminars.

**References**