

## THEORETICAL MODEL OF IMPROVING CREATIVE SKILLS OF STUDENTS IN EDUCATION OF INFORMATION TECHNOLOGIES IN MEDICINE

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**Annotatio:** *The article shows the understanding of concepts such as acmeology, subject of acmeology, subject of activity, maturity, professionalism, individualization, adaptation, creative abilities, in the basis of the theoretical model of improvement of creative abilities of students and young people.*

*Formation of students' creative abilities is considered one of the urgent problems today. Therefore, in our article, the improvement of creative skills in learning practical training in information technologies is taken into account.*

*The analysis of the quality of learning information technologies shows that in most cases the implemented teaching models are aimed at fully revealing the creative abilities of students in the process of learning information technologies.*

**Key words:** *students-youth, acmeology, subject of acmeology, subject of activity, maturity, professionalism, individualization, adaptation, creative abilities*

**Introduction.** The great changes in modern society, the expansion of international relations, the development of new telecommunications tools around the world put the task of deep and solid acquisition of Information Technology before professional people (professionals). The radical improvement of the educational

system in our country is recognized as a priority of state policy. In the implementation of this goal, new and new models of education are being created, the theoretical and methodological foundations of which are being proven in a scientific and practical way by leading specialists-scientists. In the concept of development of the higher education system in the Republic of Uzbekistan until 2030, improving the quality of training of specialists with higher education, obtaining independent education in students, critical and creative thinking, systematic analysis, formation of entrepreneurial skills, introduction of techniques and technologies aimed at strengthening competencies in the educational process, directing the educational process to the formation of, measures have been outlined for the wide introduction of educational programs and educational and methodological materials [1].

### **LITERATURE ANALYSIS AND METHODOLOGY**

Analysis of the quality of the study of Information Technology in medical OTTs has shown that the teaching models used in most cases cannot fully reveal the potential abilities of students and listeners to the study of Information Technology in medicine. This is explained primarily by the fact that teaching is aimed at the formation and development of skills and abilities in the field of science, insufficient consideration of the possibilities of improving creative abilities. Also applied were confirmation factor analysis (CFA), mean and standard deviations and Track Analysis with LISREL version 8.8 and SPSS software. The results show that administration, teaching, learning environment, motivation and personality are variables that influence the creativity of undergraduate students. CFA results show acceptable consistency. The tools of creativity and the variables affecting the creativity of undergraduate students were at medium to high levels (2.98 to 3.05 and 3.94 to 4.13), respectively. The correspondence of the causal model of variables affecting the creativity of undergraduate students is also developed on the basis of empirical data [2].

Currently, in pedagogical science, this problem is successfully solved on the basis of acmeological theory. Acmeology (in ancient Greek “akme” – peak, peak, the highest level of something) is the science of Man and studies the factors and laws,

mechanisms and methods of development of a person at the stage of maturation, in which it also covers the professional self-realization, self-creation, improvement and self-control of an individual (B.G.Anan'ev, V.M.Bekhterev, N.A.Ribnikov, V.A.Chupina)[3]. It is now known that the quality of modern education is one of the pressing problems. Researchers O.E.Lebedev, A.P.Tryapitsina and others believe that the increase in the sociogenetic functions of public intelligence as a carrier of the effective link of human future management by society is characteristic of civilization of the 21st century. From this it follows that the quality of modern education is becoming not only a theoretical, but also a practical problem. Ibragimova G.N. Explained that it is necessary to increase the level of creativity of students on the basis of interactive teaching methods and Technology[4].

In a higher education organization, it is believed that a specialist receives mainly the theoretical foundations of knowledge, and practical qualifications and skills are acquired in the process of his professional activity. However, in the conditions of market relations, little time is devoted to adaptation. It is considered possible to solve serious problems, taking into account the acmeological approach to the training of specialists. Acmeology is the science of professional competence. In antiquity, the creative state of the soul was associated with "akme". To educate "Akme", a person's creative professional training is necessary. Therefore, the program of professional self-improvement of students includes the ability to educate the psychological endurance of an individual, overcome stressful situations that arise in the process of professional activity, the independent development of professionally significant qualities, the skills of being able to effectively use their knowledge in critical crisis situations. In modern conditions, pedagogical acmeology can be viewed in the process of continuing education, which includes education after school, higher education organization, higher education organization and adults, at every age stage of a person, as a science on the laws of achieving a high level of holistic development, as well as in order to improve the quality of education at the appropriate level. Acmeology arose at the intersection of the natural, social, humanitarian and technical areas of scientific



knowledge. It is aimed at vigorously and consistently identifying the phenomenology, laws and mechanisms of the formation of a person as an individ (an extremely complex living organism) in the early, middle and late stages of maturity, as a person (in this case, a person's acquired attitude towards various aspects of reality is first envisaged) and as a subject of activity (mainly as a professional)

From the above, it can be concluded that the relationship between professionalism and creativity is an important aspect that acmeology studies. Acmeology distinguishes the following categories of creative flowering of an individual: the process of independent development and self-improvement, creative individuality, creative experience as a result of self-actualization. It should be noted that a developing person at the stage of maturity is the object of acmeology, and the subject of acmeology – objective and subjective factors that contribute to the peak of professionalism, the creative longevity of specialists, as well as the laws of training students in professionalism, improving their activities and making adjustments. It is necessary to consider the quality of the acquired education as an objective factor, the ability and abilities of a person, his responsiveness, competence, effective resolution of production issues are subjective factors. Elements of giftedness, ability, upbringing conditions in the family, educational organization, independent mobility can be considered as the main factors for achieving the peak of professionalism. When developing teaching technology aimed at developing students' creative abilities, it is definitely necessary to take into account the above. These are different qualities of a person: "individ", "personality", "subject", "individuality", as well as the peculiarities of development itself, which reveal them as interconnected and mutually implicating. It is the professional nature and activity of a person involved in the path of life, his work on the path to the well-being of society, his development as a professional in various manifestations of activity. The acmeological approach used in education provides freedom of thinking and behavioral choice, confidence in one's own strength, provides a wide range of thinking, including a range of technical thinking, erudition, as well as achieving a high level of culture. It leads to the transformation of leadership

style from authoritarian to democratic in the educational process, since such an approach is based on the humanization and democratization of Education. The study of professionalism as a high stage in the development of a person as a subject of knowledge, communication and management is the main focus of scientific research in acmeology. Acmeology defines indicators of professionalism in various areas of human activity[5]. Given that education occupies a leading place in the formation of personality, the leading role in the formation of the future professional is given to a teacher working in cooperation with students, improving the educational process using modern technologies of teaching. The teacher should monitor the psychology of each student in educational activities. To do this, conducting individual group tests, trainings and consultations (consultations) will ensure the maximum effectiveness of the learning process. The doctor will have to serve in different regions of our country after graduating from the medical higher education organization, where the qualification of a creative approach to solving both professional and social problems may be required. Discussion Professionalism has a hidden contradiction in itself. In the reflection of the structure of innovative activity, it is important to study the interaction of creativity and professionalism. On the one hand, stratifying signs that distinguish a doctor from others lead to a system of requirements that, if not followed, deprive a person of the image of professionalism. On the other hand, the higher the level of complexity of the tasks, the closer to the acmeological description of the skill, the more innovative actions, the desire to create “generally accepted” products and types of work, to deviate from the mayor are manifested. The closer the pinnacle of achievement the student must achieve, the more he manifests his “non-compliance” with meior, and the more such “disregard” attracts other people.

It is also necessary to stop at the forms of expression of individuality in the future medical and professional activities of the student. Young mental development, as noted in the scientific literature, is characterized by individuality, which increases as a person grows older. Individualization is a specific form of development. The process of individualization of students from the process of study is manifested in the following

forms: individual differences are fragmentary or episodic in professional behavior and activity; individual style as differences that persistently persist in professional activity for a long time; individual unification of styles and tasks of professional activity; individuality as a manifestation of the student's non-repetition, independence in study; individual professional worldview; often an individual variant of the professional type of personality. If individual differences persistently cover the sphere of the individual, then the existence of individuality is spoken of. Such differences can be manifested in almost all components of educational activity. Their formation occurs during the involvement of the student in the educational environment, integration, in its comparison with other students. Each student is individual, he differs from others in the choice and combination of lesson methods in training, with the qualification of being able to process the material, in relation to the given problem, with the dynamics and trajectory of movement, with the degree of pretentiousness, with the nature of his mistakes and difficulties. While the study for some students is self-test, show, others show themselves in the non-academic field. By now, in addition to general acmeology, from the issues of professional formation of a person and development in specific areas of activity, the management, pedagogical, medical, sports and other branches of acmeology began to be formalized. We rely on pedagogical acmeology in the development of a psycho-pedagogical model of the improvement of creative abilities in students of the medical higher education organization. In the system of concepts of acmeology, creativity manifests itself as the quality of a person who has become a real subject of activity and profession. Developed creative abilities help the individual to take a free direction in complex professional conditions, work with its objective and subjective organizers, introduce new methods of activity and technology. When developing a model for improving creative abilities in students of medical higher education organizations, it is necessary to take into account the psycho-pedagogical conditions and factors of personal-professional development. When developing a model for improving creative abilities in students in teaching Information Technology in medicine, we compared the existing traditional teaching model, relying on an



acmeological approach, and described its shortcomings[6]. Looking at the stages of the traditional model of teaching the course "Information Technology in medicine", relying on thematic plans, it can be seen that the main purpose of knowledge consists in the formation of theoretical and practical skills, the development of practical skills of various manifestations (review, search for new methods of execution, study and execution). At the final stage of studying this discipline, students need to know how to perform medical statistical experiments. This type of work requires students to use creative abilities, which results in most students not being able to complete the task so successfully as the above skills are not sufficiently developed. Experimental work has shown that students with high and sufficient creative abilities perform such tasks much more successfully than those whose stated abilities are not sufficiently developed. Results A creative student will have intensive mental activity, while representatives of Heuristic and stimulating-effective levels of intellectual activity are characterized by extensive (broad) mental activity. The approach of each representative to the assigned task is his own characteristic. For example, a person with a stimulating-effective level increases the pace of work at a given level and repeats his activity at a mechanically expanded level, a eurist applies New-new methods of solving the problem, a creative person studies the iuammon again and again in depth, finds theoretical explanations of the phenomenon[7]. The traditional model of teaching Information Technology in medicine does not provide for the development of creativity skills in students. The main focus is on improving the skills of being able to perform practical skills at the expense of mastering a certain number of skills necessary to perform on topics based on basic practical skills. At the first stage – the presentation stage, a new practical skill is introduced and its initial strengthening is carried out. Second-when performing a practical skill at the stage of filling with information, software (icons) i.e. characters are recognized. At the third-activation stage, the material under study is perceived by working on basic practical skills. In the fourth-reproduction phase, students apply the acquired knowledge in the performance of practical skills on the subject being studied.

Most students remember a certain amount of basic practical skills, but this does not increase their motivation to learn information technology in medicine.

It should be noted that the formation of assignments is aimed at the development of coherent thinking, not divergent. For example, read a practical skill, do it. There are very few assignments that require a creative approach. That is why students have difficulty in performing practical skills on medical statistical experiments studied in Higher courses, since they cannot accurately and correctly formulate the basic medical statistical experiment, distinguish the important from the secondary one, compare the learned facts and phenomena with the new ones, and sometimes students cannot independently carry out such tasks and require the help of a teacher. The student must perform a medical statistical experiment in a sequence of practical skills in order to receive a grade on the exam. The more students complete assignments that require sufficiently high creative abilities, the easier they will be able to complete similar assignments on the exam. The main results of the study, their scientific novelty, are as follows:: - A set of rules was determined and scientifically substantiated, which determined the theoretical foundations of the improvement of creative abilities in OTT students; - Criteria, indicators and levels of improvement of creative abilities in the study of Information Technology in OTT students were identified and substantiated; - in the study of Information Technology, a theoretical model of the improvement of creative abilities in students was developed, implemented in specially designed teaching technology; -for the successful improvement of the creative abilities of the individual, the possibilities of using teaching technology in medicine on the basis of the application of problematic educational issues in Information Technology training and the gradual involvement of students in solving projects with an increased level of complexity have been experimentally confirmed; -On the basis of Psycho-pedagogical conditions, which contribute to the improvement of creative abilities, ensuring the professional formation of the OTT student and the direct successful performance of his duties. Analysis of the quality of information technology learning shows that the



teaching models that are carried out in most cases make it possible to fully reveal the creative abilities of students in the process of learning Information Technology[8].

**Conclusion** In modern regulatory documents regulating the educational system of Uzbekistan, a special approach is made to the importance and necessity of educating students. After all, one of the leading areas of the state in the field of education is considered to improve the creative abilities of its students. Also: - it was justified that the student should have creative skills literacy in the Society of young people; - scientific views on the concepts of “improving creative abilities” of students have been speculated. - some issues were revealed in the improvement of students' creative abilities. Also, it was tried to determine the qualities inherent not only to the student, to the employees of all industries. It has been shown that it is effective to strengthen the improvement of creative abilities in the formation of new thinking literacy of students.

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