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ORGANIZATION OF EDUCATIONAL ACTIVITIES IN MATHEMATICS IN HIGHER EDUCATIONAL INSTITUTIONS THEORETICAL-METHODOLOGICAL ANALYSIS

Zulfikharov Ilhom Mahmudovich

Republic of Uzbekistan, Andijan Institute of mechanical engineering,
senior lecturer of the department of Information technology,

E-mail: izulfixarov@mail.ru, tel: +998916092928

Kuchkarov Muhiddin Umaralievich

Republic of Uzbekistan, Andijan Institute of mechanical engineering,
PhD of the department of Information technology

Annotation. This article shows the existing shortcomings and proposals for their elimination based on the analysis of psychological, pedagogical, scientific and methodological literature and regulatory legal acts in the organization of training of future specialists in higher educational institutions based on the requirements of the present time, in the organization of training in mathematics.

Keywords. Educational, technological approach, educational training, mathematics, theoretical-methodological analysis, hard skills, soft skills, pedagogical skills, method, style, creativity, pedagogical creativity, the process of creativity.

The technological approach to education is considered one of the factors that determine the active influence of the organization of education in a modern form and its effectiveness, integrity and success. The theoretical and methodological analysis of the technological approach to education shows that the social order of society is associated with the level of development of pedagogical science and individual requirements for the formation of the personality of a future teacher.

An analysis of the psychological, pedagogical, scientific and educational literature on the organization of educational activities in mathematics in higher educational institutions, as well as educational practice, shows that the pedagogical skills and desire for innovation of our professors in the organization of educational activities in a modern form are increasing.

Authoritative international experts in the field of education propose to harmoniously introduce two types of competencies into the educational process. [<https://mephi.ru>].

In particular:

"Hard skills" - as a set of knowledge that can be used to determine and measure the level of proficiency (knowledge of a foreign language, mathematical knowledge, use of computer programs and the skill of judges). "Hard skills" – specific knowledge of a particular profession will be required to obtain a "solid" qualification, and the availability of these skills will be determined by conducting a survey.

"Soft skills" - such as soft skills (creativity, teamwork skills, emotional stability, responsibility, initiative and durygia), which do not have a clear and common unit of measurement. "Soft skills" in many cases, a person is also

interpreted as a personal quality, character trait, ability, since it is directly related to his character and life experience.

Until the 21st century, in the education system, students were mainly focused on providing the level of "hard skills" - "difficult" qualifications. That is, a thorough mastery of a certain profession, the complete assimilation of its secrets - relapse as the main factor determining that this is a mature personality of a person.

And the pedagogy of the XXI century dictates that in the modern world these qualities are not enough, now it is necessary to work on the basis of the development of thinking, creative space, environment, creative personality, the need to create a creative product.

The problem of organizing training sessions in the preparation of future specialists based on the requirements of the period, skillful mastery of their profession, rapid perception and application of innovations in their activities, creative education, is the object of a number of studies.

The result of observing the process of organizing and conducting practical classes in mathematics, which is taught in higher educational institutions, shows that some professors still use the following traditional form of teaching.

Step 1. In the classroom, the teacher's work primarily discusses with the students of the group the most basic and important issues of the topic covered in the lecture, and analyzes the student's opinion.

Step 2. The teacher publishes separate instructions and recommendations for students on a specific set of examples and problems, and also shows examples and examples of problems.

Step 3. The teacher gives assignments to the students, and the students begin to complete them. Assignments will consist of examples and questions structured in a simple way.

Step 4. The teacher observes and evaluates student performance jargon and provides instructions for challenging tasks.

Step 5. The teacher gives students assignments after the lesson so that they can complete them on their own.

A creative teacher is a mature master of his profession - a teacher-educator, and it is believed that he has certain pedagogical skills. In order for a teacher to be able to successfully carry out their activities in any situation, it is necessary to constantly improve their knowledge and skills, regularly study modern pedagogical and information technologies, advanced pedagogical experience, methods and techniques, develop their professional and pedagogical creativity.

As a result of the study and analysis of literature on the content and scientific research in this area in the organization of educational activities in mathematics in higher educational institutions, discussions with experienced teachers, studying the opinions and reasoning of professors and students for the next decade, the following problems were identified.

In particular:

➤ Educational directions in the curriculum and the scientific program of practical educational activities in mathematics are given a small amount of time. As a result,

- it can be seen that the knowledge gained by students in lectures is not enough in practical classes to develop the skill of fully mastering educational materials;
- the fact is that in the organization of teaching mathematics, less attention is paid to integrative approaches that are suitable for mutagasis. The reason for this is the lack of a new generation of educational literature on the subject of "mathematics (higher mathematics)" in accordance with the requirements;
 - the fact is that when organizing teaching mathematics, not enough attention is paid to teaching using computer technology and the package of practical programs available in it. This is due to the fact that in the process of professional development of our Mutahasis Kadir, little attention is paid to the study of practical programs that meet the requirements of information technology and the formation of skills in working with them;
 - the emphasis is on the role and importance of the effective use of interactive teaching methods, methods and educational technologies in the effective organization of educational activities in mathematics. This is due to the passivity of the transition of our professors from traditional education to non-traditional (interactive, programmable) teaching methods and the process of its use;
 - the fact is that the experience of our professors is not sufficiently formed in the effective use of teaching educational technologies by designing and teaching mathematics lessons. This is due to the fact that our teachers do not have enough teaching, methodological recommendations and literature (electronic manuals and applications) to use the teaching methodology by designing and teaching subjects.

Note: in the process of studying and analyzing the regulatory legal documents of the Andijan Institute of Mechanical Engineering, Andijan Institute of Agriculture and Agrotechnology and Andijan State Universities (State Educational Standards, qualification notes, curriculum, scientific program, working curriculum in natural sciences, workload of professors and personal work plan) Andijan State Universities (SES, qualification notes, curriculum, scientific program and personal work plan), you can see the above problems.

In the process of learning, we considered it necessary to make the following proposals aimed at enhancing the process of mathematical creativity (soft skills) of teachers and students, the effective organization of teaching mathematics, as well as improving the quality and efficiency of the educational process.

In particular:

- it would be advisable if the number of hours allocated for practical classes in the subject "mathematics (higher mathematics)" in the curriculum of higher educational institutions was increased;
- based on the characteristics of the fields of education, the section "probability theory and mathematical statistics" of the subject "mathematics (higher mathematics)" to the fields of education, which belong to the field of education depending on the place of application of mathematics, would be appropriate if more attention was paid to the volume of hours and the importance of an effective organization;

- computer technologies in the organization of teaching mathematics and from the package of practical programs available in it (MS Excel, Maple, MathCad, GeoGebra, 1C Matkit8) would be appropriate if teaching using;
- it would be appropriate if interactive methods, methodologies and educational technologies are used to ensure that the teaching of mathematics is effective in order to ensure that students' interest in mathematics and their good command of it are maintained;
- it would be appropriate if the educational literature (electronic manuals and applications), reflected in the methodological system for the effective use of educational technology for teaching mathematics by designing and constructing lessons, was sufficiently presented to our teachers.

The potential of the teacher's creativity is reflected as his general characteristic. This is considered the initial condition and the result of creative activity. Creative thinking is also clearly reflected in the field of mathematics. The creativity of a mathematics teacher is reflected on the basis of his creative (creative) approach in his professional activity, organized from this side.

In foreign countries, teachers determine the presence of creative qualities in themselves and their level.

The concept of creativity of the English psychologist was elucidated and introduced by E.P. Torrens. Creativity is also reflected as an important factor in giftedness. In addition, creativity determines the sharpness of the mind and ensures the active involvement of students in the educational process. [<https://ru.wikipedia.org>].

The well-known business coach, the founder of SBA University, V. Shipilov classified the process of knowledge, skills and creativity formation according to its levels as follows (table 1) [<https://mephi.ru>]:

Table 1

Degree	Classification of degrees
<p style="text-align: center;">Degree 5 professional, Expert (master)</p>	<p>Higher (highest) level of skill development. A specialist who has reached a high professional level, an expert (authority) in his field. A person with the competencies to develop skills in their own economy, to improve further, to train others.</p>
<p style="text-align: center;">Degree 4 Advanced Specialist</p>	<p>High level of skill development. A highly qualified specialist with experience in the correct application of his skills even in complex processes and non-standard situations.</p>
<p style="text-align: center;">Degree 3 Experienced specialist</p>	<p>The average level of development of skills. A specialist who has sufficient knowledge and qualifications in his field of economics, experience and is able to effectively apply his knowledge in practice.</p>
<p style="text-align: center;">Degree 2 Developing (amateur)</p>	<p>Low level of skill development. A person in the process of acquiring certain skills and abilities. A</p>

specialist	person who has realized the importance and essence of his profession tries to develop his knowledge and skills, but cannot consistently apply them in practice.
Degree 1 Unskilled specialist	The lowest level of skill development. A person who does not have a qualification level does not understand his importance and leprechaun, does not try to develop his knowledge and skills.

In conclusion, the analysis of scientific, educational and methodological resources and practices shows that it is necessary to further improve the methodology for the effective organization of educational activities in mathematics using educational technologies and modern teaching methods and techniques, drafting individual topics of educational activities that enhance the mathematical creativity of teachers and students and further improvement of the methodology for.

References

1. Decree of the President of the Republic of Uzbekistan dated February 16, 2017 No. PF-4958 " On further improvement of the system of postgraduate education"
2. Decree of the President of the Republic of Uzbekistan dated April 20, 2017 No. PF- 2909 "On measures for the further development of the higher education system".
3. Decree of the President of the Republic of Uzbekistan dated June 5, 2018 No. PF- 3775 "On additional measures to improve the quality of education in higher education institutions and ensure their active participation in the comprehensive reforms being carried out in the country"
4. Decree of the President of the Republic of Uzbekistan Sh. Mirziyoyev dated May 7, 2020 No. PF-4708 "On measures to improve the quality of education in the field of mathematics and the development of scientific research".
5. B.Boltaboev, I.M.Zulfiyarov. THE ROLE OF PROBLEM EDUCATION IN STRENGTHENING MATHEMATICAL KNOWLEDGE // TJE - Thematic journal of Education Vol-6-Issue-October -2021, p.67-72 .
6. B.Egamberdiyeva, I.M.Zulfiyarov THE IMPORTANCE OF PRACTICAL TYPE PROBLEMS IN INCREASING MATHEMATICAL KNOWLEDGE FOR AGRICULTURAL STUDENTS // INTERNATIONAL JOURNAL OF ENGINEERING MATHEMATICS, 2021. pp. 9-14.
7. I.M.Zulfikarov, D.Kh.Iskandarov, F.U.Mamatov. FOLLOWING THE LAW OF "INTEGRAL" IN THE DEVELOPMENT OF STUDENTS' MATHEMATICAL THINKING // International Scientific Conference on MODERN PROBLEMS OF DIFFERENTIAL EQUATIONS AND RELATED DEPARTMENTS OF MATHEMATICS, - Fergana, - 2020 . March 12-13, -308-311 b.
8. I.M.Zulfikharov. IT IS OUR DUTY TO GET STUDENTS INTERESTED IN MATHEMATICS // "PHYSICS-MATHEMATICS SCIENCES" electronic magazine, -Tashkent, -2020. Issue 3, Volume 1, -11-16 b.

9. Zulfikharov I.M. Peculiarities of practical training in mathematics // Education, science and innovation, Tashkent. -2017. - No. 4. - 14-17 p.
10. Zulfikharov I.M., Akbarov S.A. LEARNING MATHEMATICS IS IMPORTANT FOR THE LIFE OF EACH PROFESSIONAL // INNOVATIONS IN PEDAGOGY AND PSYCHOLOGY Special issue 2 - 2020. 170-177 p. - Tashkent.
11. Ilkhom Makhmudovich Zulfikharov. ORGANIZING ACADEMIC CLASSES ON MATHEMATICS IN HIGHER EDUCATIONAL INSTITUTIONS OF AGRARIAN DIRECTION // International scientific and practice conference CONTING-EDGE SCIENCE-2021. may-June, 2021. SHAWNEE, USA.
12. Ilhomjon M.Zulfiharov. Methods of Organizing Mathematics Classes // Eastern European Scientific Journal// AURIS –Dusseldorf-Germany. 2018. –№ 3. –p.345.
13. Ilkhom Makhmudovich Zulfikharov, Ibaydullaev Tulanboy. Methods of effective organization of teaching of mathematics by using the problem-based teaching // International Journal of Innovative Technologies in Social Science. –9(21).2019. – p.9-13. –Warsaw, Poland. 2019.
14. Ilkhom Makhmudovich Zulfikharov, Mamarejab Tajiev. Methods of effective organization of teaching mathematics and self-syudy in the problem-based teaching // European Journal of Education and Applied Psychology, –№ 1. –2020. – Scientific Journal –Czech, Praha. 2020. –p.11-16.