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Some ways of the decision of a problem of pedagogical preparation of teachers of special subjects of the technical institutions

In clause formation of skills of pedagogical activity at students of technical colleges is considered at studying fundamental disciplines. Use of game forms of training is offered, examples of game employment are resulted at studying a rate of higher mathematics.

Некоторые пути решения проблемы педагогической подготовки преподавателей специальных предметов технических вузов

В статье рассматривается формирование навыков педагогической деятельности у студентов технических вузов при изучении фундаментальных дисциплин на основе игровых форм обучения.

Research and teaching staff of higher educational institutions is constantly updated special education teachers who finish high school. Many technical institutions are able to prepare scientists continuously - Student-Master-PhD student, PhD. After the Judiciary majority of graduates continue their education in graduate school and is a potential claimants of the research-teaching position in a technical institution. But the pedagogical training of future teachers has its problems, which to a large extent, is that they do not have such training to the teaching of students of pedagogical universities. If the last train of the first course in institutions, the graduates of technical institutions have much less opportunity to learn and practice the teaching of academic disciplines, and psychological - educational aspects of teaching. Moreover, students who go to technical institutions represent themselves engineers, not educators. To overcome these problems?

All human skill can be quite conventionally divided into life and professionally important. Such skills set, and all of them in such activities as education and general education in particular. Ability of weak and average students are often not developed because not attract them to the vibrant intellectual activity.

One of the most promising ways to improve training of future professionals who can supplement a series of engineers, and teachers of technical subjects, arming them with the necessary knowledge, skills and

practical skills including educational activities is the introduction of active forms and methods of training. Active Learning aims to make each student a direct participant in the educational process, which makes the search for ways and means of solving problems that are studied in the course of this subject.

Currently, extended search, development and implementation of active learning methods, as evidenced by numerous international and regional scientific and technical conferences. In addition, scientists more than 35 countries joined in 1984 the international association of active learning methods "WACRA", which has been successful for over 20 years. Purpose Association - generalizing and disseminating information on development of active learning in all areas of mutual assistance in training teachers and implementing methods of active learning.

Wide use in some capitalist countries have business games. They are used mainly for the formation of practical skills and communication skills in foreign language, solving problems in economic management, construction, including industrial, widely used in military affairs, business, aimed at heritage experience. [1-3].

In addition, educational games found their use during the teaching of specific disciplines, the general principles of modeling, mathematical and scientific approaches to economic problems.

Business game is to form a substantive and social content of future professional specialist simulation systems relationship characteristic of this activity as a whole. It allows not only understand the purpose of training and education, which can not be achieved by other means, but also provides social competence: social interaction skills and people management, organization of staff, ability to manage and bow, take responsibility and other social identity as a future professional . It plays a special importance in the democratization of society, the transition to a market economy.

Rozv'yazavshy it through learning the game, containing content problem, close connection with the production, can give the future engineers already in the initial training at the institute the opportunity to test themselves in a production environment. The game helps to learn the laws and regularities, check your personal results, experience with the results, experiences and opinions of others.

Educational game - a group exercise with the aim of developing and implementing optimal solutions, the application of training methods and techniques in artificial conditions that reproduce the real production

environment. Its members in the simulation, solving psychological situations get more specific picture of the nature of its future activities. Typically, the game is dynamic, taking a number of solutions and recommendations in the limited time.

During the training students have game in the motive, the essence of which is to successfully assume the role, but it primarily means to reproduce successfully the activities to which this part of his obligation. Motive activity could be the game moments, so for some students this lesson is a form of play, their zatsikavlyuye and story, and rules. For other students, especially with persistent cognitive interests, a motive may be to the content of the material, which is seen in class, in solving problems, etc.. [4], [5]. According to a motive and goal - to know the system of action necessary for the successful implementation role. Thus, the system acts in the game is a learning goal, and as any goal becomes the direct meaning of student consciousness. However, the value of educational games that are not exhausted. All that can help you successfully execute the role of (knowledge, skills, skills), has special significance for the student and qualitatively different grasp it.

Formation of the students systemized knowledge of the subjects studied involves structuring some of their learning of the game means. While educational games, students not only get more specific picture of the future professional activity, and develop analytical skills, synthesize cultural activities, they formed an integral conceptual system. Educational game allows each student to feel the subject teaching process, identify and develop their personality.

We have developed and implemented in the learning process complex educational games for the Study of Higher Mathematics in the technical institution. [6], [7]. This positive impact on students assimilate theoretical material and its application in solution of problems and the formation of independent work skills and professional orientation. But after communicating with colleagues, who were our students, we found that they have problems in the educational activity. An idea to help students acquire, though not great experience at the first course in VTNZ.

Already at the end of the first course can provide students who have the ability to continue studies in master's degree and a reserve for future renewal of the teaching staff establishment. Therefore be given to them to acquire educational skills, test themselves in the role of teacher. This may be the process of theoretical material and a lecture, and these

lectures or practical classes, and public performances before an audience of the report. At the initial training, students have such opportunity only when speaking at scientific conferences, and gain some experience at the seminars in the humanities disciplines and in solving problems on the practical lessons of general technical disciplines.

We offer educational activities to shape the skills of students of technical institutions using the classroom of the fundamental disciplines of game shape. For example, at the end of the first course in the study of topics in the course of higher mathematics "definite integral" we conducted a competition-lecture. " Any student can participate in preparing and conducting lectures on the theme of this section. Evaluation of its work takes place on the results of surveys of students who listened to his lecture on several items: accessible teaching materials, clear proof of theorems, the answer to the question, it (a clear, thorough statements), writing on the rain: contact with the audience.

In addition to lectures by the second year we offer students practical lessons on various topics in its original method. In preparation for these classes the student should review not only the theoretical material and find examples for solving and process of scientific and methodical literature, to choose for themselves one of the methods of conducting studies or to offer their work up a plan to select components.

To enable more students to test themselves in a public speech, we develop and implement in a learning process playing exercises where the participation of all students group or stream of several groups. For example, KVN - colloquia that focus on the anniversary dates of famous mathematicians. So in 2001 we held KVN - Colloquium, which was 200 - the birth anniversary of outstanding mathematician MV Ostrogradskii. Students are first rate faculty of automation and computer control systems Vinnytsia National Technical University (4 groups) during the game were able to examine in depth biography and scientific heritage of outstanding. In 2003, the entire scientific world celebrated the 100 - year anniversary of outstanding mathematician twentieth century A. Kolmogorov. Prior to this date we have developed a business game "Conference." Materials include the algorithm implementation, the scenario features the game participants, the system of incentives. Aim classes - along with gaining knowledge of probability theory and mathematical statistics, where the opening of the Kolmogorov strong soul, acquaint students with his autobiography and the mathematical and pedagogical legacy. In addition to develop their ability and organization

of scientific conferences, public speaking, research. Game studies conducted with students InAECCS 1 and 2 courses. This was allocated 2 hours of lectures and hours of consultations. Scenario games fully responsible usual scientific conference. At the preparatory stage was elected committee, which was information on the scientific conference, which included the thematic areas of work rules, requirements for the reports and their submission deadline, details responsible for each thematic area, registration to the day of the conference audience. Once you have submitted the report begins the second phase of the game. At a meeting held by the organizing committee review and selection of reports on the conference program included conferences, identified responsible for its printing and printing the invitations for the participants - speakers. Plenary during lectures on probability theory by the second year and the functions of several variables on the first course, at the time of the study subjects who have a scientific legacy anniversary.

At the plenary meeting was attended by all students. For an introductory speech was a visiting student AM Kolmogorov - Academician, Professor, PhD Kuz'min IV, who spoke on "Memories of the Kolmogorov - scientist, teacher, man." Then heard the report on the mathematical heritage of outstanding scientist, including those that were considered in the usual lectures on higher mathematics for the working plan, eg for 1 course student report in December. 2AV-02 Tracha R. "Superposition of functions of two variables, were very interesting report," Mathematics and Poetry ", " Mendel's Laws and weather ", " Mathematics and Music, "" Call the resolution matrix games in a finger strategies. Since the speakers were 42 students from two streams (180 people).

For any game should be a system of incentives, and to encourage students in our game system stimulation had not only points for performance report, and for respondents, who took part in the discussion and evaluation reports. Evaluation reports passed on several levels and positions. To do this, "respondents" had only to fill out a questionnaire if the results of their evaluation reports coincide with the expert they also receive points. Academic group, typed in a larger number of points "of" received additional premium points. All students received a total score zarahovuvalys rating module. It should be noted that the active part taken by students who had no great knowledge of higher mathematics, but always tried to improve them. A similar game, we have developed

and carried out in 2004 when the celebrated 200-year anniversary VJ Bunyakovskoho - a distinguished mathematician, born in m.Bar Vinnitsa region.

The results of surveys of students after the second study of higher mathematics to the question "do you consider yourself capable of teaching" positive responses in the experimental group at 23% more than in the control. Along with the increased number of students who wish to participate in the conference scientific and teaching staff and students.

The results of pedagogical experiment years 1995-2004 showed that the use of games for learning basic subjects, including higher mathematics, helps the learning of theoretical knowledge of students, promotes the development of processing skills training, scientific and technical literature, introduces future teachers with training and software documentation methods of analysis and sequence of work on a working plan, a subject, methods of teaching subjects, provides an opportunity at the first courses to obtain a small lektorskoho experience. Furthermore, developing skills of independent work and desire for teaching. Some students help decide whether they are able to do educational activities, provides weak students to express themselves to others with the best hand, get a sense of satisfaction, positive emotions, believe in their power.

Literature

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