

Echnologies For The Development Of Technical Competence Of Students On The Basis Of Innovative And Integrated Approaches

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ABSTRACT:

The scope of research on the decision on the establishment of students, increasing the intellectual potential on the basis of innovative and integration and differentiate and differentiate approaches is growing. In particular, the issue of developing students's technical thinking in the coordination of future engineers with international trends is a priority in the coordination of future engineers. The article explored the opportunities for the professional development of the person in the process of professional activity of technology, especially the opportunities for the development of professional engineers.

Key words: technical thinking, vocational activity, qualified specialis, personal, future engineer, quality of teaching, teaching, education, arthian, thinking, professional training.

INTRODUCTION

Technical competence is an important quality of the thinking engineer. The development of this type of thinking and success of the engineer's future activities is largely determined by the quality of the educational process in higher education. In particular, P. Debra-Retzen of the prestigious research centers of developed countries is effective in educational systems such as Talented Student Teacher Model (France), US Mistic (USA). Therefore, it plays an important role in the preparation of technical requirements for professional activity, technical use of non-standard forms, methods and combination of the tools. The scope of research on the decision on the establishment of students, increasing the intellectual potential on the basis of innovative and integration and differentiate

and differentiate approaches is growing. In particular, the issue of developing students's technical thinking in the coordination of future engineers with international trends is a priority in the coordination of future engineers.

Therefore, the opportunities for the professional development of the person in the process of preparation of future engineers in technology for professional activity is becoming increasingly relevant among the opportunities for the person to develop professional engineers. In particular, it is an important factor in improving the professional training of future engineers on the basis of modern approaches in modern approaches to the development of the quality of higher education to a new level. In order to modernize the educational process in the country, branches and

educational programs of foreign universities were introduced in order to modernize the educational process. Resumption of "Continuation of the policy of further improvement of continuing education," building and training highly qualified personnel in accordance with the work market, "on the actions strategy for further development of the Republic of Uzbekistan" and "higher education institutions"

THE MAIN RESULTS AND FINDINGS

In order to modernize the educational process in the country, branches and educational programs of foreign universities were introduced in order to modernize the educational process. Continuation of "Continuation of the policy of" further improvement of continuing education, "further improvement of international standards for the development of the Republic of Uzbekistan" training and training of highly qualified personnel in accordance with the modern labor market "and" Improving the quality of education and training »Tasks to Improve Education and Training Improvement defined.

In the implementation of these tasks, including the main characteristics of the preparation of future engineers, improving the use of modular and programmatic training technology, and improving the process of training qualified specialists on the basis of natural science.

In foreign countries, T.Ribo, P.K.Exment, P.M.Yakobson, J.Clazson, V.Luznev, V. Brazson, N.Starshinov, R. Unsterers, D.Khamblin Scientists have conducted research on the problems of development of technical thinking, B.F.Lomova, V.P.Zermenko, T.V.Kudryaktseva, E.F.zeera, G.S.Artshulla, S.M.Vassilia and other research scientists to highlight technical thinking, establish its structure and identification of independence and development of development, fundamentality in various aspects According to research, R.H.H.Hruraev, A.R.Kodjaboev, N.A.Muslimov have conducted research [1. 2. 10].

Above, thoughts and scientific research show that it is primarily necessary that the need to dwell on technical competence first, indicates the need to be needed in the essence of the main content. It is known that technical thinking is a means of understanding technical knowledge and its technical processes. Technical competence is evident in the unique situation, when it is necessary to know a certain situation or object. Development of technical thinking is the process of revealing the logically external and internal aspects of each specific component of the technique with the dynamics of bilateral development.

In this process, the activities are given to the requirements for professional qualities that are important for students of higher education, technical specialists and the personal uniqueness of the entity. Therefore, first of all, these professions have to identify the conditions of biological facilities in the required direction and should create conditions for them, that is, to act in terms of "human nature." Also, in this chapter, the objective of the engineering profession is analyzed, and the identity of the "Human-Technical" system, which is particularly beneficial to the useful terms of the environment, to the growing potential of man, The importance of justifying workloads is recognized [7.10].

Development of technical thinking in the educational process of higher education institutions has been studied in accordance with the subject of our research.

In the process of preparing for vocational activity, it is necessary to harmonize the development of technical competence of students with the use of modern interactive methods. In developing technical thinking in the students, the teacher's practicum is widely used in interactive educational techniques such as "SWoth-analysis", "Four-inzen", "Insert", "Cluster" The skill of the skillful use will bear positive results (Figure 1) [8.10].

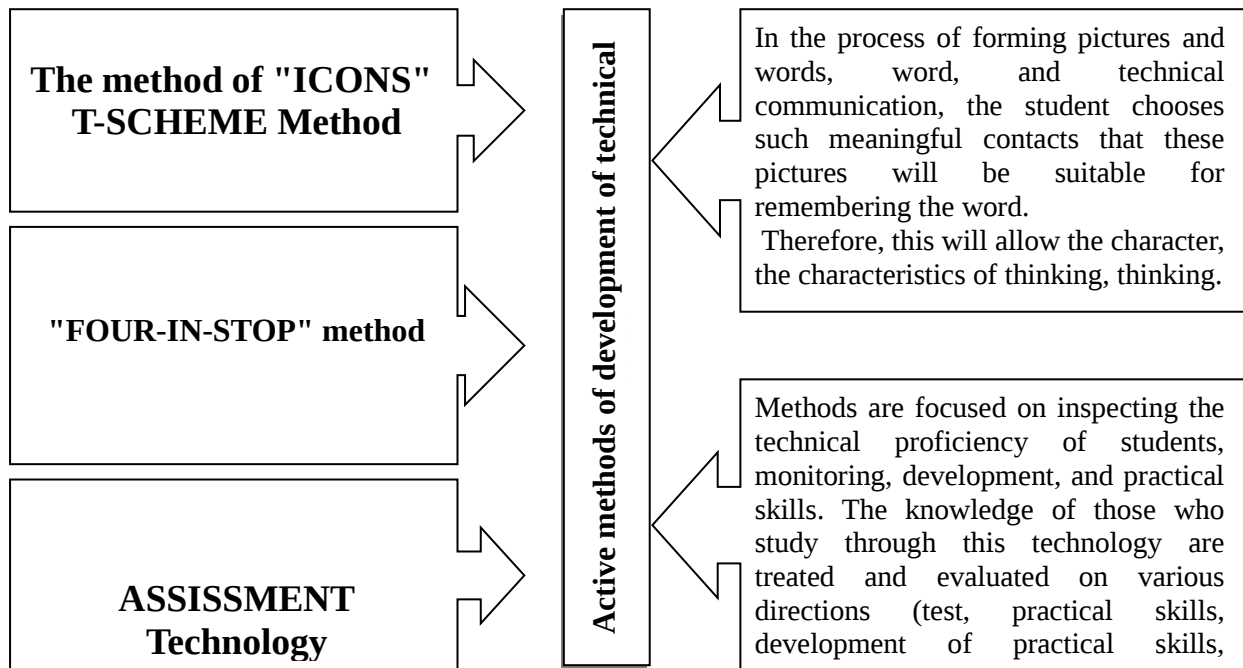


Figure 1. Active methods of developing technical competence

The use of such technologies in the educational process is an effective tool in

the development of technical thinking in students. It also had a positive effect on students' mastery of teaching materials. The following indicators of the tendency to master the learning materials were identified:

strength of interest, ability to choose and perform a variety of non-standard tasks at will;

high mood, consciously perform each task, be able to analyze the details and their specificity;

be active in the learning process, understand the complexity of the field of technology; evaluate their own knowledge and skills as a result of comparing the answers of themselves and their friends, trying to overcome shortcomings.

At the end of the experiment, the level of development of students' technical thinking was as follows (see table I)

Table I

Indicators of determining the level of effectiveness of the development of technical thinking in students (results of experimental and control groups at the end of the study in numbers and percentages)

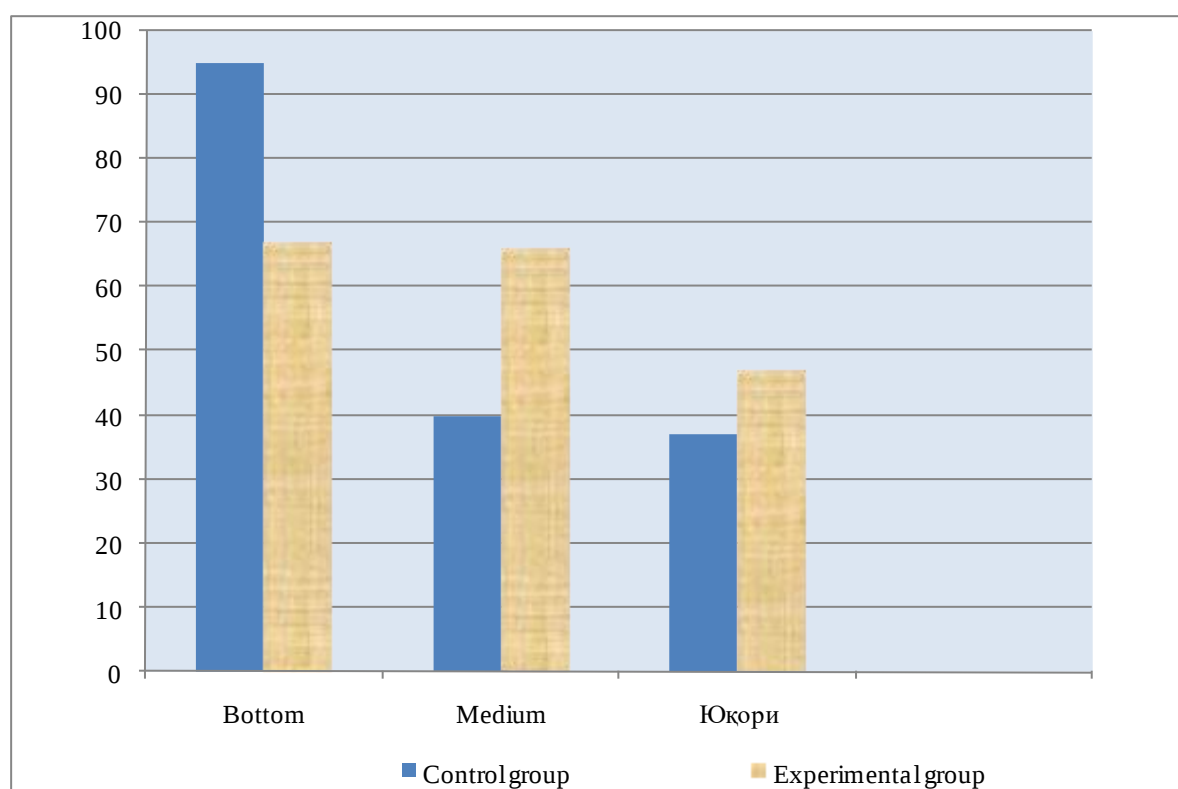
Groups / degrees	Experimental groups n 2 = 180 people			Control groups n 1 = 172 people		
	High	Medium	Past	High	Medium	Past
	At the expense of people					
Level of development of technical competence						
At the beginning of the experiment	34	49	97	36	42	94
%	18%	28%	54%	21%	24%	54%
After the experiment	47	66	67	37	40	95
%	26%	36%	37%	22%	23%	55%

Based on the results of Table 1, the indicators of the development of students' technical thinking in the experimental group were high. The following diagram also proves this.

The mastery of the experimental and control groups to determine the results of the beginning and end of the experiment to determine the level of effectiveness of the development of technical competence was analyzed using the mathematical-statistical

method on the above criteria. 180 students participated in the experimental group and 172 students in the control group.

The essence of the problem is as follows: two main sets are given, one of which is the average score of the knowledge of students in the experimental group, and the other is the average score of the knowledge of students in the control group. The grades are assumed to have a normal distribution (Figure2).



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Figure 2. Diagram of indicators of mastering of control and experimental group students

From the results obtained, it can be seen that the criterion for assessing the effectiveness of teaching is a sudden magnitude and the criterion for assessing the level of knowledge is greater than zero. It is known that the mastery in the experimental group is higher than the mastery in the control group.

Hence, the H_0 zero hypothesis about the equality of the main mean values is rejected. It can be said with 95% confidence that the average mastery rates in the experimental groups were always higher than the average mastery rates in the control groups. This leads to the conclusion that the introduced

educational technology is effective.

The similarity of the results obtained allows us to conclude that the identified evidence is legitimate and to express the problem of improvement to enhance the developmental effect of the education system.

Technical competence also poses high demands than different views and developments of memory. Especially in relation to the correct performance of actions in space and space. The ability to receive optimal solutions in a short period of time, emergency self-control, sense of stability, responsibility, business, independent work, and conscience is very important. The

"Human-Sign" is the markiness of technical facilities and technologies, taking into account the sorting, development, study, of various forms.

Professional skills have constant education, and the achievements of human thinking, and complex objects can provide information exchange and management, consistent with digital material. [1.2]

Depending on the object of the reflexing technical competence is highlighted by the following views:

1. The communicative reflexes act on the reasons for another person's inner world and actions;

2. The personal reflection analyzes their actions, personal images as individuality;

3. Intellectual reflection acts with knowledge of objects, personal behavior methods.

The reflexing ensures the development of creative thinking, as it allows man to reject stereotype approaches [1].

Technical thinking is manifested in the professional activity of the person in the aoretical and practical point of view. He contributes to the person self-government in professional activities. It is determined that human motivation is consistent with the ability of a person to reflexivity. He is manifested in the success or success of the person's activities and determines whether it is ready for a person's mood and work. In turn, the motoration and operational components of the preparation work through the reflexing.

All this will look as a clearance of a specializing life or specialist who owns the future profession, and allows students to develop technical thinking in the process.

Development of technical thinking is carried out in accordance with the structural structure of the accumulated experience, ie the structural structure of previously described technical thinking: can be seen as a unit of structural components: understandable, figurative and practical results unit and interaction. It follows that students need to learn to do the concepts of not only the concepts, technical and technological concepts that come together,

but also to perform the relevant actions using concepts and images.

Depending on the distinguished components and properties of technical competence is closely linked to each other, students are based on the development of technical knowledge and intellectual skills in stable unity.

Tar technical thinking is component of the following components: concept, figurative, practical result component [8.10]

A conceptual component of technical thinking is developed by students in the development of knowledge in technical academic subjects.

The image component of technical competence is developed in the process of working with the images of technical facilities. This is an integral part of technical competence. In the educational process, students will create a learning environment in technical education if there is no ability to manage technical objects in terms of images. In the process of preparing for vocational activity, along with the development of technical thinking of students, it allows the student analysis process of analysis of professional activities.

A practical outcome of technical results is a set of actions (skills) where the process of solving technical problems and practical inspection of theoretical solution. These actions allow to change the contents of the thinking that exist in the form of concepts and images in accordance with the purposes.

Practical results can be divided into two, i.e. practical (assembly, installation of the device, and others) and in intellectual (s solistic, etc., etc.). The inspection of technical "Thinking" according to the purposes of both practical and intellectual movements can be researchers, executive, control and correction.

Among those who have intellectual abilities can be identified efforts to master the knowledge of students, applying mastered knowledge, organize their knowledge. It can be said that the modeling in the form of a pedagogical event helps to approach a generalized majority of complex pedagogical problems.

In the field of agricultural mechanization, it helps to model the process of developing the recommendations and technical thinking of future engineers.

Development of technical thinking in the educational process of higher education institutions has been studied in accordance with the subject of our research.

In the process of preparing for vocational activity, it is necessary to harmonize the development of technical competence of students with the use of modern interactive methods. In developing technical thinking in the students, the teacher's practicum is widely used in interactive educational techniques such as "SWoth-analysis", "Four-inzen", "Insert", "Cluster". The skill of the skillful use will bear positive results (Figure 1) [8.10].

CONCLUSION

During the experimental work, the level of knowledge, skills and skills in developing the technical competence of students were conditionally developed on the basis of the "High level", "Medium Lower" and appropriate quality indicators.

Level "High": Realizing the essence of technical competence; can accurately analyze the technical problems; can distinguish between details by means of thinking; If he knows his thoughts and views; "Showcase" is developed; "Discovered" ideas are logical; can make a technical final conclusion;

Level "Medium": If it lights uncens in technical competence; fails to clearly proof of ideas and views; If the analytical "discoveries" there is noiation; if the attributes of competence mastered the attributes of thinking; prevent technical mistakes in theoretical and practical aspects; **"Lower":** There is no clear technical competence; cannot prove his thoughts and views; technical "discoveries" cannot be made of prepared ideas; if the qualities of thinking have not been formed; If they do not shape their views and views according to the technique [1.2].

The level of formation of technical thinking on the basis of students is attempted to identify the level of experimental and control. The similarity of the resulting results will allow us to conclude that the

law is the law and that it is possible to express the problem of improving the development of the education system [6.7]. Analysis of data showed that teachers estimate of teachers' technical competence levels are lower than the real value and self-evaluation of students in all faculties. According to teachers, the level of marks of technical competence of students are not compatible with the signs of real technical thinking, and in some cases they vary significantly. In some perspective, it is clear that the required development of suggestions and recommendations:

Technical competence skills of students should be developed with the beginning of the training in the course of technical higher education;

The application of new technical concepts should always organize periodicals, as as a result, the skills and skills of experience in students are formed.

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