

Robotics in Their Classes Technical Creativity in Development Used Methods Technology

Nasrullayeva Fatima Azatovna

Teacher of department “Methods of professional education”,
Tashkent State Pedagogical University

Abstract: The use of innovative techniques and technologies is required to find a practical solution to problems in the socio-economic and educational spheres on a global scale. In the article of students’ technical creativity in formation done increase in the eye caught works, modern lesson transition stages, innovative from technologies lesson in the process use methods analysis done. Analytical data robotics basics direction based on light up given.

Keywords: Creativity, technical creativity, electronic platform, scientific research, scientific development, innovation technology, robotics, technique, technology, modern tool, robotics elements.

1. Introduction

Modern of society development scientific and technical development with organic depends. Information and communication and engineering technologies education of activity indispensable to the part turning and their efficiency significant level increasing the number of students intellectual, emotional and personal abilities each bilaterally to develop maximum level contribution adding and this technical of creativity innovative direction - robotics development for comfortable environment forms. Young generation creative abilities development and their technical readiness improvement idea important from tasks one is considered new country education standards concept of students’ creative potential development and personal development in the trajectory cognitive abilities to form attention directed without work developed. Education robotics the basics education student and of young people own fate himself determine forming their creative abilities development on of work important element and tools turning around is going and technical and engineering thinking to form is providing. Main common medium education schools state education standard we teachers high technology engineering and programming with depends topics development of robotics in class and from class except to events to integrate impulse gave. In school’s robotics of the foundation’s education relevance technical creativity development new duties with are determined, modern science is practical in action technical and information knowledge harmonize will receive to experts has been of demand from the top come comes out. Each of the student ability open give, high technological, competitive in the world to life ready person education - the state education standard modern of education goals as defined. Robotics education to the process current achievement “Technological education”. Done increase main of means one become the world technological of development modern requirements suitable coming scientific and technical potential forms. From class except of training main advantage to the students them development and constant variable individual socio-cultural and educational needs to satisfy directed wide scope activity done increase opportunity is to give. Robotics of the school from class except to the activity current from doing the goal of the person each bilaterally development for

comfortable conditions create: intellectual development of students interests, abilities and to their talents answer give, their himself education, professional himself himself determine. Students' robotics in the class together activity state education standard shown creativity qualities to form help gives. To robotics about training study to the process current reach as a result in students technical creativity abilities fast in paces formation is achieved.

Robotics of students' creativity competence in formation big to opportunities have. Robotics lessons to competence based on without right approach according to organize reach positive the effect increases. In education new approaches teachers in teaching applied methods again seeing to exit, them to learn, to search and forward to shift forced does.

2. Materials and Methods.

At school technology in their classes' robotics from the complexes the following in directions use can:

- demonstration to do;
- front lab works and experiences;
- research project activity.

Robotics the basics teach efficiency the following methods using held lessons organize also depends on:

1. Cognitive (ready examples observation, modeling, illustrations learning, shown materials perception analysis to do and to generalize attraction did without students by new the material perception to understand and memorize).
2. Projects method (self-models work exit in the process skill and abilities appropriation and creative in application).
3. Systematization (subject according to conversation, systematized tables, graphs, diagrams and others build).
4. Control method (practical assignments perform in the process knowledge, skills and qualifications appropriation and them correction quality in determining).
5. Group work (models together assembly work as well projects work on the way out is used).

Robotics in learning applied main method this project method. Project method when you say student own problems to put and solution who does study situations organize to do technology and of the student independent activities support technology is understood. To the project based on education - complex, real questions and thorough work developed assignments based on wide extensive research activity through students' knowledge and skills to take over attraction doer systematic teaching method. Robotics lessons of students each bilaterally development and new generation standards shown the most important competencies formation for opportunities creates. In the students engineering thinking to teach and in development systematic activity approach app reach in order to school teachers own in their work robotics of teaching the following methods they use:

Pattern according to design. This robot (or structure) builds of the technique show. First, see the robot will be released, the main parts are emphasized. Then the student with together of the designer necessary parts size, shape, color according to is selected and from that only later all parts together will be collected. All actions of the teacher explanations and comments with together will come

According to the model design. In the model him organize doer a lot elements hidden. A student which robot (detail). from parts collection need independent respectively determines. According to the model in construction analytical and imaginary thinking activates. Marked to the conditions according to design . To the reader the work methods without showing perform

need has been conditions collection offer will be done. That is, he is a teacher design method does not give, only of the robot practical application about speaks. A student ready product samples analysis to do, they have important features separate show them main of signs to similarity according to grouping, form and in size main of properties differences to the target (defined depending on the conditions to understand learns 5-6 grade in this of students' creative abilities develops.

The simplest drawings and visual diagrams according to design. Design initial stage schemes very simple and in drawings in detail to be need. Schemes using students not only build, perhaps actions sequence right choose ability they develop. Later, the child not only scheme according to dry maybe on the contrary - the diagram visual to the construction according to drawing can. That is, students future construction stages independent designation and him analysis to do they learn.

A student creativity according to design. Previous robotics methods from mastering then the students themselves wanted way designs can. Now they are design topic, to him answer to give need was requirements themselves determine and him. Creativity according to in design before received knowledge and skills creative respectively is used. Children's not only thinking, perhaps cognitive independence, creativity activity also develops. Students' construction materials with experience conduct can. Robots more and more different and dynamic be to go to be achieved it is necessary.

3. Result.

These are methods from the students' materials, details design and own ideas design and done increase ability with requires work. In class teachers to the project based on of methods they use mechanisms work exit task formation, discussion do, work the plan work exit with together will come. Teachers' projects protection to do separately attention they give. Robot complexes based on of projects to himself feature is the device models to build to the student different knowledge fields between relationship perception reach enable gives, this while computer science, mathematics, physics, drawing, natural sciences of training development with technical creativity through engineering thinking organic to connect help gives.

4. Conclusion.

So robotics basics department universal education of students actions efficient forms students scientific and technical creativity and engineering and construction thinking efficient develops, school leadership, pedagogy team, students, parents team, school social partners of students different disciplines according to research and project skills to develop contribution adds, students engineering and technology sciences and to the profession to redirect interest to develop help berad, final to the result reach for of students collective action ability develops. Read the students encourage in order to school inside robots' competitions organize will be done. In the contest take exit for children logic or robot programming language such as more complicated topics to learn encourages.

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