PROBLEM SOLVING FOR TECHNOLOGY STUDENTS

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Аннотация. Бу мақолада техника йўналиши талабаларига дарс жараёнида қўлланиладиган фаолият турларининг муаммоли ечимлари ҳақида гапирилган. Мақола ёзиш жараёнида янги педагогик технологиячларни афзалликлари мисоллар билан ёритилган.

Калит сўзлар: глобаллашув тенденциялари, мамлакатлар, инглиз тили, муносабатлар, чет эликлар, инглиз тилидан фойдаланиш, технологиялар.

Аннотация. В статье показано использование новых педагогических технологии во время занятиях и написано о решениях в проблемных ситуаций для студентов технических направлений.

Ключевые слова: тенденции глобализации, страны, английский язык, отношения, иностранцы, использование английского языка, технологии.

Annotation. In this article is show using new pedagogical technologies during the classroom and is written about solving problem situation for technical direction students.

Keywords: globalization trends, countries, English language, relations, foreigners, use of English, technology.

Obviously, in the 21st century, the trend of globalization is leading to closer relations between countries. Of all the different languages, English as an international language or lingua franca is widely used for communication between people and countries can almost be called a single language. The English language has spread and developed all over the world and this is a fact that should never be ignored. Today many people are using English as the main language of communication around the world, especially in the last decade. As realizing that the government of Uzbekistan is also paying great attention to the development of the English Language. A decree “ On measures to further to improve foreign language learning system «signed by the first presidents degree of the republic of Uzbekistan Islam Karimov on December 10, 2012 fortified the implementation of entire enhancement of the system of teaching youths the English languages and training of specialists able to communicate in the language fluently. As a consequence, the number of English learners and qualified teachers in our country has exceeded enormously.

Topicality of the project is today, as a technological education, there is a commitment to the learning process; research and sciences, design in technology and technology education reveals different learning emphases in processes and content, reflecting different goals and aspects, as well as traditions of pedagogical and educational research. This article explores these differences and argues that each area of the curriculum can learn from each other. Despite the interest in processes, problem solving continues to be neglected in every problem area, especially with regard to empirical reports of student problem solving activities and supportive pedagogy. This article draws on situational learning and the literature on social constructivism to provide insight into problem solving strategies for English high school students. These strategies represent their response to technological actions and the learning environment created by educators.Practical importance of the project. The materials analyzed in the present project can be used in the courses of English ESP classes. Moreover, the materials of the research are useful for constructing lesson plans for ESP English classes.

The expected results:

1. Using of new methods in learning English will promote development of critical thinking of the students meaning who give chance to students of self-realization, develop their creativity and problem solving.

2. Learning English will allow uniting, educational and educational training in one complete development of the creative person are whole

Providing students with valid problems.

Providing students real problems and asking them to find solutions through pedagogical method brainstorming engage their higher order thinking skills. But for me, identifying real problems that students can solve is one of the hardest parts of creating STEM lessons.

These should be tasks that students can reasonably estimate.

Helping students develop problem-solving skills is an often cited goal of nature science educators. The National Nature Science Teachers Association (NSTA), in its 1980 position statement, advocated for nature science educators to help students learn and think logically, pointing out that "...school laboratory and fieldwork should emphasize more than just acquisition knowledge, but also problem solving. decisions and decision-making".

Problem solving means a lot to a lot of people. For some, this includes an attitude or disposition towards exploration, as well as the actual processes by which people attempt to acquire knowledge. Typically, when teachers discuss student problem solving, they expect students to be involved in the mental operations of analysis, synthesis, and evaluation (considered as higher-level thinking skills). The American

College Testing program has redesigned the college entrance exam with a new focus on assessing higher-order thinking skills.

The focus of problem solving research in science varies by discipline. The following studies are representative examples grouped by natural sciences (biology, chemistry) and exact sciences (physics):

Solving problematic research in biology. Much of the problem solving research in high school biology is related to the teaching of genetics. In a recent article on teaching genetics, Stewart talked about how different types of tasks can affect learning outcomes in different ways. Stewart argues that two main types of thinking are used in solving genetic problems: reasoning from causes to effects and reasoning from effects to causes. Most genetics problems in high school or college introductory textbooks involve causation, with the complexity of the problem depending on the genetic content and formulation. Such problems require content-specific algorithms. Cause and effect problems do not give students an understanding of nature in science. However, an effect causing problems may develop if computer generated information is provided. The most important understanding that students can gain by solving problems related to investigation may come from understanding science as an intellectual activity.

Solving problems in physics. Research in physics has gone in two directions: research in information processing, concerned with observable and measurable steps in problem solving, and research in decision engineering, in which researchers are concerned with the internal cognitive processes that lead to these steps. Much of the exploration of concepts and conceptual change in physics has been done against a backdrop of problem solving, with students working on problems found at the end of a physics textbook.

The two exemplars below report on technology education in Canadian schools in the province of Ontario. Technology education has recently become part of the core curriculum for all children from grades 1 to 9, after which it becomes an elective in secondary school as Broadbased Technology Programs (see Broad-based Technological Education Programs, Ontario Ministry of Education and Training, 1995). In technology education, regardless of grade level, an open-ended problem solving approach using design processes addresses the technological process of creating, inventing and modifying.

Human factors, societal factors and environmental concerns are crucial to technology education. Together, these three issues make up the three major areas of study – physical products, human processes and environmental systems. According to the Ontario Ministry of Education and Training, all three use technology to adapt the physical and natural world to meet human needs. The technological knowledge and skills that are required for these adaptations are further divided into ten technological

concepts – structures, materials, fabrication, mechanisms, power and energy, control, systems, function, aesthetics, and ergonomics.

Board games appeared to hold a solution for many teachers. Over the last 15 years board games have been actively promoted as such a solution. They are enjoyable and motivating. They can be constructed to answer specific curriculum specification.

Board games can be especially useful in problem solving and building real-world skills in a fun and non-threatening environment. For this reason, I used board games extensively for Business English classes and lessons.

According to Hyacinth Gaudart theory there are some types of board games; Board games, multi-level board games, multi-purpose board games, constructing board games.

• Multi-level board games- is to design it that would have the same layout but would challenge different groups of learners.

• Multi-purpose board games- is design the boards in such a way that they can be used over again without the learner realizing that they are using the same board.

• Constructing board games – are constructed and designed games by students their own which helps to identify how they understood the goal of the lesson.

All in all this paper examined an alternative approach to technology education that is a demarcation from what is typically found in schools; design, make and appraise cycles based on closed design briefs that are teacher assigned and unrelated to the students' world. Design process is frequently depicted as prescribed, systematic and linear. An alternative approach is to interpret technology education as problem solving in real-life contexts using design processes as tools for creation and exploration. To be 'authentic', technology education needs to relate to real-life problems, or contexts. In order to do this, the way the design process operates must be understood and at the heart of the educational practice in technology education. The design process is not a neat systematic process. Instead it has iterative patterns, has to produce some order from disorder and shares features of what has been explored in research on creativity. A further key concept in technology education is the need to combine thought with action-conceptual and procedural knowledge. Researchers using this alternative approach to technology education need to write about and disseminate their work to provide a better understanding of the complexity of real-life design and the advantages of teaching technology education through this design lens.

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