# TECHNICAL THINKING IN ENGLISH CLASSES AS A PSYCHOLOGICAL AND METHODOLOGICAL PROBLEM

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## ABSTRACT

The article deals with the features of technical thinking in English classes as a psychological problem. Nowadays, one of the topical problems is to educate students in productive thinking, to evaluate their ideas and to analyze the current rapidly developing technical education. At the same time, thinking skills and English language have been important in education of highly qualified specialists.

**Keywords:** Technical thinking, methodology, psychology, communication, speech, modern education, development, socio-political.

## Introduction

In the conditions of democratic transformations taking place in the country, in connection with the renewal of the socio-political, socio-economic and cultural life, the question of the social function of modern education, namely the study of foreign languages, becomes acute. The progress of society largely depends on the quality level of education, upbringing and development of the younger generations.

The development of a student's personality cannot be imagined without the ability to correctly state and substantiate one's thoughts and judgments not only in native language, but also in a foreign language. Along with other world languages, today English is one of the real means of communication in the formation of a single economic, social, cultural, informational, ecological space and market.

The effectiveness of teaching English is currently determined, to a greater extent than previously, by the rationalization of the educational process and the efficiency of its use.

In addition, English (like other world languages) is the key to the achievements of world culture, science and technology, literature and art. Possession of them contributes to improving the quality of training of highly qualified specialists, the need for which increases in modern conditions of accelerating scientific and technological progress and the development of market relations.

In accordance with the concept of teaching a foreign language and a new program, a practical, communicative goal is teaching students to communicate in a foreign language and to think in English. Successful achievement of this goal is associated with modern methods, techniques and organizational forms of education, including individualization and differentiation leading in the educational process.

**Materials and methods**

Modern answers to questions about what to teach and how to teach foreign languages are based on the research of speech and thinking, thinking and communication, communication and speech.

When students learn a language, they essentially need to learn to think in that language. Thinking in the English language is characterized by specific features and has some peculiarity in comparison with thinking in the native language, as a result of which teachers must take special care of the formation of a slightly different thinking, for example technical thinking. Meanwhile, the problem of the relationship of technical thinking and speech communication is extremely complex.

Problems of formation and development of technical thinking have always been relevant to solving issues related to teaching students of technical universities, because the ideas about the patterns of formation and functioning of technical thinking that are formed at a certain stage in the development of science largely determine the organization of a learning foreign language process.

Thinking is a mental activity; it begins with a problem situation, proceeds to the task and to the search for a way to solve it. There are simple tasks that require a well-known, automated set of operations for their application. There are tasks that require searching for a special solution based on the knowledge and skills developed by a person. Usually, a person's thinking is minimized; it uses visual-shaped, emotional, motor components.

The thesis of thinking in English classes implies a rapprochement and identification of thinking and communication. To communicate is to think. Speech and thinking are inseparable from each other as processes.

The atmosphere of communication is a leading feature of the modern lesson of a foreign language. To successfully train some kind of activity is possible only in adequate conditions; therefore, creating an atmosphere of communication is an urgent need when the teacher and students become speech partners: otherwise it turns out that we teach communication outside of communication.

In psychological science accumulated significant theoretical and practical material on the development of human thinking in the learning process (B. G. Ananiev, L. S. Vygotsky, V. V. Davydov, L. V. Zankov, A. N. Leontiev, V. S. Mukhina, D. B. Elkonin and others). This development is largely determined by what means and on what content it is carried out. Development occurs within the teacher – student relationship in the process of learning the generalized experience recorded in the system of scientific concepts and methods of action.

L. S. Vygotsky was one of the first to clearly form an understanding of a speech act as a process of moving from thought to word, to external speech. "Thought is the path from a vague desire to mediated expression through meanings, or rather, not to expression, but to making a thought in a word."

**RESULT AND DISCUSSION**

At the same time, development is understood as a purposeful process of functional improvement of students' mental activity in accordance with the requirements of their future profession and working conditions [2, 45]. To achieve the desired level of development of

students' technical thinking, it is necessary for the teacher to understand the role of education in the mental development of the individual and to master them with special means for organizing thoughtful and purposeful educational work.

Speech action begins with motivation; this corresponds to the emergence of a problem situation. The second important link in speech generation is speech intention, having the speaker already know what he will say (by meaning).

During the internal programming of a speech utterance, the speaker decides on the nature of the subsequent utterance. This is followed by the implementation and comparison of the result obtained with the intended goal.

In the psychological dictionary, thinking is viewed "as an indirect and generalized reflection of reality, a type of mental activity consisting in the knowledge of the essence of things and phenomena, of natural connections and relations between them" [4,191].

O.K. Tikhomirov [5,16] suggests the following definition of thinking: "Thinking is a process, a cognitive activity which products are characterized by a generalized, mediated reflection of reality, it is differentiated into types depending on the levels of generalization and the nature of the means used, depending on the novelty of these generalizations and means for the subject, on the degree of activity of the thinking itself".

The term "technical thinking", which is often mentioned in the pages of psychological and methodological literature, was first introduced by P.K.Engelmeyer in his work "The Philosophy of Technology" [1, 141]. In this paper, the author does not attribute technical thinking to any particular type of thinking, but argues that "there is a particular mindset that can be called technical."

Technical thinking is commonly understood as a generalized reflection in the mind of a specialist of significant facts, phenomena, processes in their necessary, essential connections and relations characteristic of this type of activity [3, 117]. The teacher, who has a technical thinking, is able to assess the importance of developing technical thinking of students in the English classes, as well as master the techniques, methods, and skills that allow solving this problem effectively.

The development of the human mind is influenced by the human environment, education, and professional aspects of education.

Because of the wide variety of human needs, interests, and activities, the human mind can also appear in different situations variously.

The more multifaceted the mental activity that the student is able to perform with the support of the English language, the process of communication in this language will be freer and more adequate.

The task of the teacher is to give learning (as a specially organized process) form of communication and conditional situations. Speaking skills should be developed in the context of learning communicative situations that simulate real speech communication, while using certain language material.

**CONCLUSION**

The learning situation is designed to meet the needs of students in speech communication. Exercises should contain as many problematic issues as possible, allowing students to express opposing points of view, argue and persuade. Active participation in solving problems increases the interest in learning the language, and satisfaction from finding an independent solution is a strong motivating factor developing students' technical thinking.

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