

MATHEMATICS IN ENGLISH FOR STUDENTS

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Abstract:

This article focuses on the teaching and learning of mathematics in English. About the features and advantages of this method, examples of their application are considered.

Keywords: teaching in English, VALUE, MOODLE, mathematical terminology.

The study of a subject, such as physics or mathematics, through a foreign language (integrated learning) has become of particular importance due to the expansion of the circle of international communication and the need for communication in a foreign language. These trends are reflected in the exemplary programs of the disciplines "Foreign Language", and in the state educational standard of general education. So, even at the basic level, among the requirements for the subject results of mastering the course, there are "achievement of a threshold level of foreign language proficiency, which allows graduates to communicate in oral and written forms both with native speakers of the foreign language being studied, and with representatives of other countries using this language as a means of communication. ; the formation of the ability to use a foreign language as a means of obtaining information from foreign language sources for educational and self-educational purposes"[1].

Integrated learning is based on the fact that subjects are taught and learned in a language other than the native language of the students. Let us mention some features and advantages of this method:

- Knowledge of the language becomes a means of studying educational material.
- The language is built into the broader curriculum.
- Learning becomes more successful as children increase motivation, the language is presented to children in a natural situation. When students are interested in a topic, they strive to master the language for communication.
- With this method, a broader cultural context is introduced.
- It prepares for internationalization.

- This method helps to obtain international certificates, improve the rating of universities.
- With its help, general and special linguistic competence is increased.
- Students are better prepared for future learning, work.
- The methods and forms of the teacher's work in the classroom are being diversified [2].

It should be noted, however, that all the advantages begin to appear, as a rule, with prolonged work using this method.

Another fact is that among Russian teachers of mathematics, few people are familiar with this specificity. English-language mathematics is a kind of exclusive service, and there are professionals who have been working in this field for many years, but mostly only in the tutoring market. As for the foreign experience of teaching mathematics in English, it is interesting to note here the manual [2]. For these authors, the principle of teaching mathematics is based on the method of classifying topics and lesson structures, with the interpretation of many terms and the analysis of problems. The authors attach instructions for teaching mathematics in English.

It turned out that students' success in writing test papers and passing exams in linear algebra depends little on the student's basic language training, but to a greater extent is due to the student's efforts and his good mathematical skills obtained in high school. Lectures and practical classes in linear algebra do not require the use of complex grammatical structures in English. But on the other hand, one should not “simplify” the language, it should be quite rich and lively. Classes in linear algebra in English should be very dynamic, you need to try to maintain the constant interest of the audience, and it is much more difficult to do this than during similar classes in Russian. Since English is not a native language for most listeners, it is more difficult for them to focus on the material being presented. In this regard, maintaining silence and discipline becomes especially important. On the other hand, the use of a well-researched Western textbook [9] provides undeniable advantages.

All students are connected to the innovative interactive learning system VALUE, based on the MOODLE software product. All communication between the teacher and students on VALUE takes place in English. Before the start of the academic year, the author uploads electronic versions of English-Russian and Russian-English mathematical dictionaries [9], textbooks, and a training program on VALUE.

Announcements, texts of tests and control questions, as well as other materials on linear algebra are constantly updated. The author came to the conclusion that during practical classes all the basic mathematical terms should be translated into Russian. Thus, students learn mathematical terminology not only in English, but also in Russian. At the beginning of each lesson, a topic is written on the board in English, and an oral translation into Russian is immediately given. In this regard, students immediately understand what material they have to master in the classroom. For a better understanding, during the lesson you have to write more on the board, while in the “Russian-speaking” groups, many of the phrases are enough to say out loud. Students called to the board to solve problems must speak English and not switch to Russian. The teacher, if necessary, corrects the student, and repeats the phrase loudly and clearly enough for the audience. All tests, tests and exams in mathematical disciplines are carried out by students exclusively in writing and only in English. Thus, in mathematics classes, students have a good opportunity to maintain and improve their English. In addition, most importantly, a standard course of mathematics for financial and economic specialties of universities is assimilated, supported by effective Western textbooks and problem books with an analysis of many practical examples.

Thus, in the modern educational situation, when there is an increasing need to study certain subjects in a foreign language, which is one of the components of the successful performance of students at competitions, tournaments, olympiads, conferences, bilingual teaching of mathematics makes it possible to simulate speech situations, improve scientific, linguistic level of students, to motivate the further improvement of such skills.

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