On the Issue of Introducing Steam Education in the Process of Teaching the Russian Language

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ABSTRACT

This article is devoted to pedagogical methods for the development of students' language competencies based on STEAM technologies in the study of the Russian language. The paper considers some ways of introducing humanitarian, natural and technical fields of science in the process of learning the Russian language.

Key words: STEAM education, competence, Russian language, integration, technology, critical thinking, and software.

INTRODUCTION

The development of highly organized thinking and training in the effective application of the acquired knowledge in various fields is carried out through STEAM education.

Scientists have repeatedly noted the importance of higher education, which includes natural sciences, technology, engineering, mathematics, and art. This is one of the most important areas of the XXI century. Modern employers prefer specialists who are well versed in these subject areas. This technology contributes to the integration of different areas, which allows the student to learn individual subjects in their relationship within the framework of complex educational projects.

One of the fundamental tasks of this direction is to improve the skills of critical thinking in a person who can find answers to any questions experimentally, exploring and applying their abilities in practice.

The gradual implementation of this model of education, which combines five disciplines together, allows us to turn to an interdisciplinary and applied approach at the same time. The innovative educational environment provides an opportunity to prepare students at a professional level for the advanced technically developed world. This is a kind of bridge connecting the educational process with the further professional growth of a person.

For the first time, American students managed to combine theory and practice in a single educational process, which showed amazing results as a result of the experiment. In the United States, STEAM education is recognized by the National Research Council and the National Science Foundation (NSF) as the technological foundation of a developed society. The degree of training of the

labor force in the field of STEAM is an indicator of the ability of a nation to maintain its development [1].

So, this direction is becoming very popular. A number of countries, including Uzbekistan, have developed STEAM-based programs that have been presented at educational festivals by various companies.

MATERIALS AND METHODS

Despite the fact that scientists have recognized the importance of integrating the above-mentioned areas of knowledge, language teachers have some difficulties in implementing STEAM in the learning process of students.

When working with students who study Russian, unlike other groups, additional support is required to develop academic language skills.

It is necessary to promote language acquisition and learning through various teaching methods, including the development of communication skills, academic discourse, support in the use of sentence frames, increase in general academic and specific subject areas, as well as the development of vocabulary.

However, in each of the areas of learning on STEAM technologies, there are concepts that we can adopt to deepen the structure of learning Russian.

Training content

Science, engineering, and mathematics can be challenging, so students need to understand not only the complex academic language and vocabulary, but also all the information content and processes. However, there are several techniques that teachers can use to help students improve their knowledge of science, engineering, and mathematics.

For example, you can invite students to find and read articles that combine topics from these areas. There are many useful websites that contain useful information for both teachers and students. Some of these online resources contain short articles written on a wide variety of topics, including questions related to science, engineering, and mathematics, which can be shared with students with different reading levels.

By studying articles on the suggested topics, students can practice literacy skills, accumulating basic knowledge and at the same time developing comprehension skills.

Along with using text, teachers should focus on expanding their vocabulary. This is one of the main ways to deepen students ' knowledge in the fields of natural sciences and scientific principles, engineering and mathematics. Here it is important to focus on the common vocabulary, as well as on the vocabulary of a specific subject area. Of course, both types of vocabulary are crucial in expanding a student's vocabulary.

The vocabulary related to the subject area includes those words that relate to the content being studied. Let's consider a few examples of words-photosynthesis, flora, fauna. These terms refer to botany and do not apply to other subject areas.

The emphasis on general academic vocabulary and subject area vocabulary is made on root words, prefixes, and suffixes. This practice has a solid research base and teaches students word analysis and word families.

Since most of the vocabulary in these content areas has Latin roots, it is possible to teach students who speak other foreign languages, such as Spanish, Italian, French, or others, that Latin roots in academic vocabulary words can give them clues to words they may know in their native language.

Students of the Russian language need to understand the instructions given in the tasks. While there are many strategies to help make your instructions more understandable, a few simple ones involve using visual elements – photos, sketches, graphs, or videos.

In addition, preloading and pre-teaching key concepts of vocabulary and content will also help to provide students with the vocabulary they will need to gain a deeper understanding of the concepts and skills they are learning.

Technology

The integration of technology into learning benefits language learners as well as students who are native speakers of a particular language or are fluent in it. The integration of technology into learning introduces students to the tools that are increasingly used in the process of further work in any specialty.

However, there are some ideas on technology integration for students studying Russian. Since we are talking about technologies, then it is worth turning to software. What support can Internet sites, computer programs, and applications provide for students who are not yet proficient in the language?

One common support that teachers can include is the various translation services that technology can offer. Although translation can be a useful tool in the classroom, teachers should be careful when using it.

In other words, students should not strive to translate everything, but rather use translation software or applications to try other ways to determine the meaning of words or phrases. When reading, students should first try to determine the meaning of the new words using contextual hints. Or, if the word is used by a teacher, they can add a visual aid or share the meaning with the student as needed.

Ultimately, students should not just type everything into the program so that it is translated for them, but should use these tools wisely when they cannot determine the meaning of words, phrases, or text in other ways.

In addition, students may not have equal access to technology. Some may have additional or more limited access to various devices at home.

It is important that teachers are aware of the various situations that occur in the lives of students. There may be cultural differences in terms of technology use that should also be considered, including the number of electronic devices used and how they are used in the school or at home.

Visual art

When discussing STEM education, the integration of art is often overlooked. Although art itself is a subject area, it can be integrated into all areas of human activity. Art is an important part of a versatile person.

CONCLUSION

In addition, art is the cornerstone of civilization and culture. The inclusion of the arts in learning is not frivolous; rather, it brings a different modality to learning. For language learners, adding art objects can also help reduce the language load on assignments.

Through the integration of the arts, students can demonstrate learning, take notes, or otherwise assimilate the information presented, while relying less on language. Art also helps students demonstrate concepts in non-linguistic ways. Non-linguistic representations are used in a variety of subject areas, including mathematics and natural sciences.

Of course, many of the topics and strategies discussed here relate to every area of STEAM. However, practical exercises, including conducting experiments in science, using an interactive whiteboard with students, creating objects and correcting design in engineering, developing collages in art, or using mathematical manipulations, all benefit not only language learners, but also those who are fluent in it.

<div align="center">REFERENCE</div>

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