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ТЕХНОЛОГИЧЕСКИЙ УНИВЕРСИТЕТ

# SCIENCE, CULTURE AND YOUTH

Сборник трудов по материалам  
VII Международной студенческой  
научно-практической конференции

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**Сербаев М. С.**

## **How does learning English influence the effectiveness of learning programming languages?**

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*This article is devoted to the study of the relationship between computer science and the English language. It examines the impact of learning foreign languages on the brain areas associated with the effective study of programming and says about the advantages that language learning gives. Statistical survey of the author and studies of Swedish scientists are presented. Some proposals to improve the current situation are suggested.*

**Keywords:** English, programming, brain, efficiency.

The benefits of learning English in the Russian Federation is an urgent question today: they are asked by both schoolchildren and students of all directions. In addition to the obvious advantages in the form of the opportunity to communicate with foreign colleagues, there is also a hidden connection between the English language and computer science. So how does learning English affect learning programming languages?

Let's start with the fact that all modern programming languages are based on English, so in order to understand what is written, it is necessary to have basic knowledge of English. Unfortunately, good textbooks and video lectures are not always translated into Russian, so a person who does not study a foreign language risks to fail in getting useful knowledge in computer science.

To get full picture of what is happening, it is necessary to get acquainted with the opinions of leading experts in the field of information technology. Anton Korzunov, an interface developer at Yandex, believes that: «Ignorance of the language is absolutely unacceptable — you cannot name variables with functions using transliteration. At the same time, grammar and literary English are not particularly needed. And forums, especially if they are not only read, but also written, help well. But slowly». [2] Artur Sakharov, Technical Director of Redmadrobot, shares the position of Anton Korzunov and says that: «A properly compiled query in Google saves a lot of time. So without knowledge of English, you will work twice as slow as the rest». [2] And Microsoft Technology Evangelist, Associate Professor at MIPT — Dmitry Soshnikov thinks that: «Ignorance of English is critical for any modern person working in the creative field. After all, without a language, you limit your social circle only to Russian-speaking interlocutors, while there are many active talented people all over the world». [2]

I have made a survey on the subject matter of knowing the English language in a forum group of programmers. The results showed the following: 17% of them rated their knowledge of English as excellent, 68% know English well and only 15% poorly. In addition, among the respondents, 89% are confident in the necessity to learn English for computer scientists. It is clear from the survey results that most programmers are aware of the importance of knowing English and are trying to improve their knowledge of the language to improve their own skills in computer science.

To understand how learning foreign languages affects the brain as a whole, you can refer to the famous Swedish study. [6] Scientists have identified two groups: students of the Military Academy of Translators, studying foreign languages at an unprecedented rate, and students of Umea Swedish University — mostly doctors and psychologists. After that, all participants in the scientific experiment were subjected to MR tomography, and two pictures were taken with a time difference of three months. For all these three months the students had been studying very hard. As the pictures showed, the brain of doctors and psychologists had not undergone absolutely any changes, despite persistent studies. But linguists observed a slight but constant growth of some parts of the brain — the hippocampus and three specific areas of the cortex. Thus, it can be understood that learning languages physically affects the human brain, increasing the hippocampus, which in turn is responsible for memory and concentration — things incredibly important in programming. The previous studies have shown that people who speak two or more foreign languages are much less at risk of developing Alzheimer's disease. [4]

In addition to the physical effects on the brain indicated above, learning languages gives many advantages to a programmer. In particular, it makes it possible to create joint projects with foreign colleagues. Students who know English well can become participants in the student exchange programs, thus gaining invaluable knowledge and experience abroad. In addition, freelancing is a great opportunity to work from anywhere in the world, to work effectively on foreign freelance sites, you need to know English pretty well.

However, at the moment, not enough attention is paid to English. Here is what is needed to improve the current situation:

- To learn professional English with terms from computer science;
- To increase the number of hours of English in the training program;
- To focus on the meaning of English terms in computer science lessons;

I think that these measures will help improve the knowledge of professional English and increase the speed of learning programming languages and computer science in general.

Summing up, we can say that English is necessary for a programmer to effectively learn programming languages. It does not only help to develop in the field of information technology, but also improves brain functions!

### References:

1. How does learning a foreign language affect our brain? [Electronic resource]. URL: <https://lingualeo.com/ru/blog/2017/07/10/kak-izuchenie-yazyika-vliyaet-na-mozg/> (from 11.03.2022).
2. How important is it for a programmer to know English? Is it possible to do without it? [Electronic resource]. URL: <https://tproger.ru/experts/13/> (from 11.03.2022)
3. Kazantseva Asya — how learning a foreign language affects the brain? [Electronic resource]. URL: <https://lifehacker.ru/kazanceva-o-jazykah/> (from 11.03.2022).
4. Move your convolutions: how and why learning languages changes our brain [Electronic resource]. URL: <https://www.popmech.ru/science/699103-shevelizvilinami-kak-i-pochemu-izuchenie-yazykov-menyaet-nash-mozg/> (from 11.03.2022).
5. Scientists have found out the consequences of learning languages for the brain. [Electronic resource]. URL: <https://ria.ru/20200205/1564293844.html> (from 11.03.2022).
6. Swedish scientists have proved that learning foreign languages can promote brain growth [Electronic resource]. URL: <http://www.nashaamerica.com/blogi/education/item-2528/> (from 11.03.2022).