

# **MACHINE TRANSLATION AS A TRADITIONAL AND MODERN TOOL IN LEARNING LANGUAGE FOR SPECIFIC PURPOSES**

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Learning English for specific purpose is essential for students to be in touch with latest achievements. So, new ways of talking and thinking about translation are urgently required. Machine translation, a functional development in information, is becoming more elaborated and improved so it is getting popular with students nowadays. This paper deals with the main challenges in machine translation, both solved and unsolved as well as analyzed the fact why MT is demanded in English for Specific Purposes regardless of apparent drawbacks.

Learning foreign language for specific purposes and translation a lot of sources on the subject of students' qualification are invariably seen as complementing each other. Ever-developing technologies provide an effective tool for students, which they can rely on when coping with the large amount of information in foreign languages – machine translation (MT). MT is often taken skeptically by teachers for a number of disadvantages, such as lack of grammatical accuracy and inferior grade of translation quality of the texts with ambiguous words and sentences [2]. On the other hand, it can hardly be ignored in learning English for specific purposes (ESP) because it is often free (not all of them are free, but the most) and available for students at any time. The main advantage of machine translation systems is that they let students deal with authentic information in foreign languages extremely quickly and cheap. This paper considered the main problems of machine translation, both solved and unsolved as well as analyzed the fact why MT is demanded in ESP regardless of apparent drawbacks.

Machine translation is the process of translating language by computer [6]. It is a process, sometimes referred to as Natural Language Processing which uses a bilingual data set and other language assets to build language and phrase models used to translate text. Using of computer in order to translate texts was suggested as soon as it was invented. The Georgetown-IBM experiment, presented in 1954, was the first demonstration of the machine translation to public [1]. Despite the fact that the system had a vocabulary consisting of 250 words, could use 6 grammar rules and translate only a few phrases, it drew attention of people to prospects of computational linguistics.

Since then machine translation industry has experienced up and downs and now it is very popular all over the world. People use it when they face

the need to understand general meaning of a text, multilingual information in the Internet, quickly correspond with people in social networks. As can be seen, it is mainly used when something must be translated quickly or in case you do not need to understand the information completely.

Nowadays the most popular systems of machine translation are: Google Translate, Toolkit, Systran, PROMPT, Freetranslation, Translate, etc. Their algorithms of works are different. There are two types of machine translation: Rule-Based Machine Translation and Statistical machine translation.

Rule-Based Machine Translation (RBMT) is based on linguistic information about original and target languages, consisting of grammar rules, lexicon, morphological, and syntactic regularities of each language. Algorithm of the systems is simple: rules are applied to the target text, which are put in correspondence with structure of the original and target languages. Initial stage of work includes morphological, syntactic, semantic analysis of the text for creating an internal representation of it. Translation is generated by using bilingual dictionaries and grammatical rules. Main disadvantages are complexity and duration of development, necessity to maintain and update the linguistic database [5].

Statistical machine translation is based on finding the most probable sentences with using a bilingual corpus of texts. Computer does not operate linguistic algorithms, but calculates the probability of a particular word or phrase. A word or sequence of words, which have the optimal probability, are considered the most appropriate translation of the source text and substituted by a computer in the resulting text. Numerous grammatical errors, instability of translation are considered as disadvantages [4].

However, machine translation still maintains some advantages. It can provide a quicker translation of large texts, thus saving time and capitals. Due to the popularity of the translation, lots of translation programs can be purchase off the shelf, making it affordable to all users. There is no need to say that hiring a professional translator is hardly possible for the ordinary student, e.g. to present a part of their research paper in professional foreign language. Also, when we need to get the general idea of the text, MT can be effective in this area [3]. MT can be treated as a possible tool that helps present results of scientific research in foreign journals.

Although human translators are a reliable source for translating texts, they often are limited to the number of languages they can specialize in. But a machine translator can provide its service in a variety of languages, and often it can be customized to suit the context of the field. Therefore, for students who need to study authentic sources in different foreign languages, a machine translator would be actually helpful.

Other valuable benefits of translating engines include syntactic and morphological accuracy, stability and predictability of the outcome (for RBMT) and Quick Setup, easily addition of new translation directions when we exploit statistic-based machine translators.

It is obvious that machine translation is still imperfect and people face with a lot of problems during the process of translation. There is inaccuracy, grammatical and lexical errors, but the main difficulty is that it is hard to formalize natural languages.

Machine translation systems work more efficiently on technical and specialized texts, which are edited afterwards. There is a simple rule that helps to improve the quality of machine translation from English into another language: no passive voice, gerunds and compound sentences. Each sentence should consist of one thought. We considered the problem of corresponding the translator database of words to the source text contents by translating the same phrase from English into Russian with some machine translation systems and inverse translation as well:

*«The number of Russian banks declined from 1000 before 2008 to about 900 in 2012. Many of these are so-called pocket banks, serving the needs of their owners rather than retail clients».*

Using [translate.google.com](http://translate.google.com):

*«Ряд российских банков сократилось с 1000 до 2008 года до 900 в 2012 году Многие из них так называемых карманных банков, обслуживающих потребности своих владельцев, а не розничным клиентам».* Inverse translation:

*«A number of Russian banks decreased from 1000 to 2008 to 900 in 2012. Many of these so-called pocket banks serving the needs of their owners, rather than retail customers».*

Using [www.translate.ru](http://www.translate.ru):

*«Число российских банков уменьшилось от 1000 до 2008 к приблизительно 900 в 2012. Многие из них - так называемые карманные банки, удовлетворяя потребности их владельцев, а не продают в розницу клиентов».* Outcome of inverse translation:

*«The number of the Russian banks decreased from 1000 to 2008 to about 900 in 2012. Many of them – so-called pocket banks, satisfying needs of their owners, but do not sell at retail clients».*

This example indicates that existing machine translation systems were far from being able to produce error – free text. However, judging in relation to getting the main idea from a foreign article, the level of accuracy is sufficient enough and with minimal correction can be used in a student's research work.

Relevance of using the machine translation when learning languages for specific purposes depends on the information and the quality that is required. Machine translation is becoming popular, which means that machine translation systems are evolving and being improved. In spite of continuous improvement of machine translation systems, they are still imperfect and do not guarantee the absolute accuracy of the translation, causing some problems for both students and their instructors.

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