



CHALLENGES OF TRANSLATION RELIABILITY IN THE ERA OF TRANSLATION TOOLS: ANALYSIS OF TRANSLATIONS FROM THE SERBIAN LANGUAGE

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Abstract:

This paper aims to explore how the use of the internet and machine tools facilitates the process of translation. Translation tools such as Google Translate, Yandex Translate, and ChatGPT were used in the research. The original text in the Serbian language was translated into five foreign languages: Russian, German, Greek, English, and French. After comparing translations into these languages using three translation tools, it was shown how internet tools can help solve translation dilemmas, as well as what their reliability and accuracy are. Thanks to translation tools and an abundance of updated information, adequate application of translation methods and procedures is enabled, contributing to the acceleration of the translation process and the improvement of translation quality.

Keywords:

Translation Tools, Google Translate, Yandex Translate, Chatgpt, Reliability, Accuracy.

INTRODUCTION

Over the past half-century, researchers have dedicated significant effort to the creation of machines or software that could replace human translation, either partially or entirely. In the present era of rapid technical and technological development, which has facilitated the quick acquisition and dissemination of information, the need for such technologies has become increasingly pronounced [1]. Information technologies have exerted a tremendous influence on the advancement of society and science, easing both personal and professional life, albeit requiring continuous monitoring of scientific progress in this domain. In this regard, the everyday use of foreign languages for professional or personal purposes necessitates active reading and writing in the target foreign language, thereby increasing the demand for translation from one's native tongue to the targeted foreign language.

The advent of the internet has revolutionized the ability to network a vast number of computers, enabling real-time communication with people worldwide and granting access to immense amounts of information stored on computer servers across the globe [2].

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This form of communication has also opened up access to an array of resources that can assist and streamline the translator's work. The utilization of machine translation technology has significantly risen in recent years for cross-border communication [3].

The relationship between information technologies and professional translation is particularly noteworthy. On the one hand, translation has historically facilitated the dissemination of new scientific and technological knowledge, while on the other hand, science and technology have significantly influenced the field of translation. It is evident that technology plays a pivotal role in both scientific and professional translation [4].

Nowadays, translators, as well as non-professionals, have access to a variety of translation tools that can assist them in their work. Translation tools encompass a range of software that facilitates the translation of written text from one natural language (source language) to another (target language). Existing translation tools can be broadly categorized into three types: fully automated machine translation, machine translation with human participation and machine-aided human translation [5].

2. TRANSLATION TOOLS

This paper shall focus on three free translation tools that are widely used today due to their accessibility, and we will aim to present their advantages and disadvantages.

Google Translate is an online machine translation service developed by Google, which uses artificial intelligence and neural machine translation techniques to translate text from one language to another [6]. Launched in 2001, Google Translate has since become one of the most widely used machine translation tools, providing translations between over 100 languages.

Google Translate is a machine translation tool that can be used to obtain basic information about the original text through moderate-quality translations. It is a popular tool due to its low cost and ability to provide instant access to general information about a text in over 100 languages [7]. As of May 2017, it is being used by over 500 million people daily and is considered to outperform other publicly available machine translation tools [8]. However, in recent years, Google Translate has increasingly incorporated neural machine translation (NMT), which uses artificial neural networks to model the complex relationships between words and phrases in different languages [9].

Yandex Translate is a statistical machine translation system that is capable of translating individual words and complete texts, and is available in 94 languages as of March 2018 [10]. The translation process relies on a translation model that contains a comprehensive list of known words in each language, along with their corresponding translations in other languages. Therefore, each language has its own unique translation model, which is built through cross-referencing translated texts and works in different languages, also known as a parallel corpus. To improve translation accuracy and context, the system continuously processes new texts from multiple sources, which is why a large number of sources are needed [11].

The introduction of a public tool developed by Open GAI – GPT or Generative Pre-Trained Transformer [12] – has brought many changes into many spheres of human endeavour. Although its capabilities, accuracy and reliability have not been thoroughly investigated yet [13], ChatGPT is frequently used as a translation tool for different purposes.

Despite its widespread use and significant advancements in recent years, Google and Yandex Translate still have limitations in terms of accuracy and naturalness. In particular, language translation software often struggles with translating idiomatic expressions, cultural references, and complex sentence structures. Nonetheless, the translation tools remain a useful and accessible tool for a variety of purposes, from basic communication to professional translation. Machine translation can provide significant assistance. However, despite the progress achieved thus far, machine translation remains unable to match the translation capabilities of the human mind. Consequently, researchers are striving to develop more sophisticated translation technologies that can reach the level of human translation ability. Advancements in translation technology can have a profound impact on how information is conveyed, both at the personal and professional levels. In the future, machine translation and other translation technologies may play a pivotal role in shaping global communication and promoting cross-cultural understanding.



3. METHODOLOGY

The topic of our research is to test the reliability and quality of text translations using digital translation tools such as Google Translate and Yandex Translate, which are mostly used, and the artificial intelligence ChatGPT, which we assume will be widely used for the purposes of translation.

The purpose of our research is to determine whether we can rely on translations of text that are not written in a scientific or administrative style but rather a newspaper article with an inconsistent style and to verify whether there are any differences in the solutions offered by the tools. We compared the results obtained and drew conclusions for each of the five languages – Russian, French, German, Greek and English.

The original text is from “Politika”, a Serbian daily newspaper [14].

4. ANALYSIS AND DISCUSSION

4.1. RUSSIAN LANGUAGE

In terms of understanding the translated text, it can be concluded that all three tools translated the text in such a way that its meaning was conveyed entirely in Russian, with a few significant errors.

Regarding the use of words in grammatically correct forms, it was expected that the translation tools would make a significant number of errors, but analysis showed that there were no morphological errors.

Furthermore, it can be noticed that broadly speaking, they are correct, but there are also places where the word order is not in the spirit of Russian, but rather follows the word order in the Serbian text.

When examining texts translated with the assistance of these tools, it is noticed that all three translations are quite different. Also, the title of the news is translated differently in all three texts, but the meaning is correctly conveyed.

The sentence that represents the project name "I mede i med – da uvedemo red" contains a diminutive that was expected to be an "issue", which was confirmed. The project name appears in the second and last paragraphs and it is translated differently. Yandex had the same and wrong translation in both places, that is, the word "cub bear" was translated as "honey" while Google and ChatGPT correctly translated the word as "cub bear" in one place and the word "honey" in the other.

If the entire project name is considered, the best translation is provided by GPT at the end of the text.

All three translations are correct, but the most reasonable one is ChatGPT since the term "Zlatiborci" is translated as the phrase "residents of Zlatibor," while with the others, it would be necessary to explain in a footnote who "Zlatiborci" are. Google left the noun in the nominative case, as a foreign word that has not been translated. One of the drawbacks is also the translation of the text containing words or sentences in a language that is not specified to be translated from, these tools translated it into the specified language. There is a sentence in the text in English that all three tools translated into Serbian, but the quotation marks were different. ChatGPT and Google Translate used so-called French quotes («»), which are very common in Russian spelling, while Yandex used upper quotes (""). One should be careful and not translate parts of the text that are not in the specified language integrated with the rest of the text. Everyone can boast respect for spelling rules. Only one major error occurred in the analyzed text, where the translation tool (Google Translate) divided the sentence or used a period where it cannot be.

Having mentioned everything above, it can be said that today's translation tools can greatly help a person understand a text that has been translated from Serbian to Russian, but the text gained as a result of machine translation still cannot be considered completely accurately translated.

4.2. FRENCH LANGUAGE

Based on comparative analyses of the translation of the given text, it can be concluded that all three tools managed to translate the text into French so that the meaning has been fully conveyed. However, there were several translation errors, especially in style and conveying the spirit of the language. Moreover, two tools – Google and Yandex, have retained the structure of the Serbian language more, while GPT used structures characteristic of native speakers of the French language more successfully, thereby contributing to the quality of the translated text. This tool also used the most appropriate choice of words in line with the given context.

It was expected that the translation tools would make a significant number of errors in the use of words in the grammatically correct form. However, the analysis revealed that there were no morphological errors.



Observing the sentences obtained by machine translation, they are generally speaking correct. However, there are places where the word order is not in line with the French language but follows the word order present in the Serbian language, especially with the Google and Yandex tools. For this reason, the translation of these two tools is more clumsy and less receptive to the French language system. ChatGPT managed to adapt the word order that is unique to the French language and thus translate the text harmoniously.

When analyzing texts translated using these tools, it is noticeable that all three translations are different, i.e., different words and phrases were used during the translation of the same parts. What is interesting to note is that the title of the news was translated differently in all three texts, but the meaning was successfully conveyed. The title translation using the GPT tool is still mostly in the spirit of the French language.

The name of the project "I mede i med - da uvedemo red" contains a diminutive word that was a challenge during translation and this was confirmed. The name of the project appears in the second and last paragraph and was translated in different ways. Google translated the same phrase that appears twice differently. In the first case, it was translated as two bears, although the number two is not mentioned but it recognized that it was a noun in the plural and used the plural article. In the second case, it did not differentiate between "mede" and "meda" and translated both terms as "med". Yandex gave the same and incorrect translation in both cases, i.e., the word "meda" was translated as "med". GPT correctly translated in both cases, making a distinction between the diminutive "meda" and the noun "med". If we look at the entire phrase "I mede i med - da uvedemo red", the best translation is with the help of the GPT tool during the first occurrence in the text. It should be noted that the tools do not always translate the same phrase in the same way in the same text.

For the term "Zlatiborci," we have concluded that all three translations are correct. The most understandable translation is via GPT because the term "Zlatiborci" was translated as the phrase "residents of Zlatibor," so even for those who do not know that Zlatibor is a toponym, this tool explained that they are residents of that place. With the other two tools, it would be necessary to explain in a footnote who "Zlatiborci" are. Google left the noun in the nominative case, i.e., as a foreign word that is not translated. Google left the noun as it is, while Yandex translated it as "Zlatibor residents."

One of the problems with translating text is when the source text contains words or sentences in a language that is not specified to be translated, and machine tools have translated them into the specified language. For example, there may be a sentence in English in the text that Google and Yandex have translated into French, while GPT has left the sentence in English, as it appears in the original text. It is important to note that it is necessary to pay attention and not translate parts of the text that are not in the specified language, and they should not be integrated with the rest of the text. This tool left the noun as it is in Serbian, however, it did not leave it in the dative as in the text but put the noun in the nominative, its base form since French does not recognise the case system. Yandex correctly derived the name of the inhabitants, using the formative ending for the plural of nouns denoting the inhabitants of an area -iens.

It is important to emphasize that spelling rules have been respected. Speaking of the use of quotation marks, all three tools used upper quotation marks according to the French spelling system. When it comes to the use of commas, Google and Yandex left them as they were used in the original Serbian text, while GPT adapted them to the French spelling system.

After analysing the above examples of translating from Serbian to French using Google Translate, Yandex, and ChatGPT, we can conclude that today's translation tools play a significant role in facilitating the understanding of texts in other languages. However, despite their advantages, we should be cautious while using them, as translation errors can sometimes occur, leading to an incorrect interpretation of the text. As we have seen in the previous examples, each of these translation tools has its advantages and disadvantages. It is also important to keep in mind that other types of errors occur in the translation process, such as the incorrect interpretation of phrases, inaccurate translations of idioms, etc. Therefore, before using any translation tool, it is necessary to check the quality of the translation and, if necessary, adjust the translation to avoid any ambiguity and misunderstanding of the text.

Translation tools are useful and practical for translating texts quickly, however, they cannot replace human knowledge and the ability to understand language. Therefore, one should always be cautious when using these tools, checking the quality of the translation and comparing it to the original text to ensure the translation's accuracy and comprehensibility.



4.3. GERMAN LANGUAGE

By examining the understanding of the translated text, it can be concluded that all three tools translated the text in a way that preserved the meaning of the text as a whole. However, errors that were noticed and identified could not be logically linked to the text.

Regarding the use of words in grammatically correct form, it was expected that the translation tools would make a significant number of mistakes, but this did not happen.

In terms of syntax, it can be concluded that in some places the sentences were translated literally, which was least noticed in ChatGPT.

When looking at texts translated with the assistance of these tools, it is noticeable that all three translations are understandable but translated in a different way. It is interesting to note that the news title in all three texts was translated differently, while the meaning remained unchanged.

Regarding the sentence that represents the name of the project "I mede i med – da uvedemo red", it was noticed that Google translated the phrase correctly into English in the first part of the text, but in the other part of the text (the same phrase) into German without making a distinction between "mede" and "meda". Yandex had the same mistake in both places, while ChatGPT replaced the word "mede" with the word "bees" in the first part of the sentence and correctly translated it in the second part, thus making a distinction between the words "mede" and "med".

All in all, all three translations are correct, however, the translation provided by Yandex is the most understandable as it translated the term "Zlatiborci" as "Zlatiborcima" and thus put the noun in the genitive plural, while Google left the noun in the nominative. ChatGPT transformed the sentence and put the noun "Zlatiborci" in the genitive plural. It is necessary to emphasise the accuracy regarding spelling rules. In the analysed text, one translation tool (Google Translate) divided the sentence, or used a period where it should not be put.

It is concluded that translation tools can translate the text as a whole and be a good support, but such translated texts still cannot be considered as a complete and entire translation, so it is advisable to be cautious when using the analysed translation tools. The advantage of using translation tools is that they provide more translation solutions.

4.4. GREEK LANGUAGE

The text translated from Serbian to Greek using all three tools is understandable with a larger number of significant errors. Most errors are morphological, when it comes to the use of articles before nouns and adjectives, which then leads to errors in declensions. In terms of syntax, the tools translated sentences literally, so in many sentences, the meaning was changed.

The sentence that was in English in the text was translated into Greek in all three cases.

The sentence that represents the name of the project "I mede i med – da uvedemo red" contains a diminutive for which we expected it to be a "problem" during translation, which was confirmed, only ChatGPT translated the word "meda" as "cub bear" while the other two tools translated it as "honey."

The word "Zlatiborci" was recognised by all three tools, translated as "residents of Zlatibor."

4.5. ENGLISH LANGUAGE

Having analysed all the translated solutions by all three translation tools, it can be concluded that all the tools provided a meaningful translation of the text. Even though it has been assumed that there would be a significant number of mistakes in terms of grammar and morphology, the tools translated it with few errors.

The best solutions were provided by ChatGPT since it used the structures of the English language, translating the text in accordance with the very language. Google and Yandex mostly followed the structure of the original text, translating the text literally – word-for-word from Serbian to the target language. It is interesting to mention that all the tools provided different solutions for almost all the parts of the texts. However, the overall meaning remained unchanged.

The name of the project „*I mede i med – da uvedemo red*” seemed to be the greatest issue. Each tool recognised a diminutive for the word “bear” as “honey”, thus it has been wrongly translated by the analysed tools.

Another issue was the name of the inhabitants of Zlatibor – each tool has a different solution for the word “Zlatiborci”. Google kept the base form of the word “Zlatiborci”, although it can be seen in the genitive case in the original text as “Zlatiborcima”. Yandex suggested adding the suffix -ians, while ChatGPT translated this word as “people from Zlatibor”.



Speaking of punctuation, Google and Yandex leave the signs where they originally are in the text. On the other hand, ChatGPT pays more attention to this segment putting the signs in accordance with the language.

Taking everything into consideration, the texts gained as a result of machine translation are understandable and can help one in understanding the overall meaning of a translated text. Using these methods to translate texts is time-efficient as well. However, machine translation is not the most reliable way to translate from one language since there is still a lot to be improved, especially in the style a machine uses while translating.

5. CONCLUSION

The use of machine translation has become increasingly common nowadays due to an increased need for intercultural and international communication. Even though, these translation tools can be useful for basic communication and understanding, they are not always accurate and sometimes may not be able to convey the meaning in the target language entirely. Furthermore, relying on translating tools can easily lead to miscommunication or misunderstandings.

In this paper, it is concluded that translation tools can provide a complete translation of the text and that they could be good support. Nevertheless, texts translated in this manner still cannot be considered completely and accurately translated, thus it is advisable to be cautious while using the analysed translation tools.

As one of the greatest advantages of using translation tools, we would highlight providing multiple translation solutions. Translation tools are useful and practical since they are able to translate a text quickly, faster than a human being. Still, it is impossible to replace human knowledge and their language comprehension abilities.

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