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ACHIEVING ALTERNATIVES TO WRITTEN AND ORAL TRANSLATION PROCESSES FOR ENHANCED ACCURACY AND EFFICIENCY

Jumaeva Muhabbat Mustakimovna
Navoi State Pedagogical Institute,
Faculty of English Language and Literature

ABSTRACT

This article explores alternatives to traditional written and oral translation processes to enhance accuracy and efficiency. It begins by differentiating between written translation, where both the original and translated texts are printed, allowing for extensive revisions, and oral translation, which involves transferring the main meaning of spoken statements between languages in real-time without the opportunity for corrections. The article examines various types of translation, including successive, visual, and simultaneous, and discusses their distinct characteristics. It highlights the classical classification of translation into written and oral types and elaborates on their specific processes and challenges. The analysis reveals significant differences in the form and execution of written and oral translations, emphasizing the limitations and strengths of each. The article also discusses the potential of visual translation and the use of speech-to-text software to streamline translation tasks. This innovative approach aims to reduce the mechanical workload of typing, thereby enhancing the efficiency of written translation. By comparing the cognitive processes involved in both translation types, the article underscores the importance of psychological factors and suggests ways to improve translation practices through technological advancements. The findings offer insights into achieving more effective and accurate translations, benefiting both translators and their clients.

KEYWORDS

Oral translation, written translation, cognitive processes, adequacy, equivalence.

Introduction

A written translation is a type of translation in which both the original text and the translated text are strictly printed texts, and the translator has the opportunity to refer to them as many times as necessary during the translation process to ensure the most accurate translation. Also, when performing a written translation, the translator has the opportunity to make necessary changes to the translation text before it is presented to the translation client.

Oral translation is a type of translation in which the main meaning of an oral statement is transferred from one language to another. A remarkable feature of interpretation is its non-fixed form, which means that the translator can perceive the original text only once, and also does not have the opportunity to compare or correct it after the translation is completed.

There are the following types of translation:

1) Successive translation.
2) Visual translation.
3) Simultaneous translation [1].

The types of translation presented here have their own characteristics, which are classified by specific characteristics.

Currently, most linguists and translators divide translation into two main types in the classical classification, i.e., oral and written. The main types of written translation are full, abbreviated, and abstract. Oral types of translation include simultaneous, consecutive, and paragraph-phrase. At the same time, the result of a visual translation can also be written, which is not an exception given the active use of speech transcription programs by translators. This is confirmed by the software features announced by the developers, without taking into account the statistics. The average speed of typing on the keyboard is 80 words per minute, and a person speaks at a normal speed of 100-120 words [2].

As with any other translation, there are two stages in translating from a written source - understanding the source text and repeating the translation. The translator begins the perception of the source text in written form with linguistic signs. In the process of recognition, symbols are perceived through graphics (perception) and compared with traces in the cerebral cortex. Then comes the conceptual stage of perception; at this stage, the information received through mental processes of the brain is connected with a certain concept [3].

After implementing the initial idea of the text to form the internal program of the speech, the translator begins to select specific means of language expression (forms of words, phrases, sentences) in accordance with the rules of the translated text, and through articulation: begins the expression of oral sounds. The speech-motor articulation function plays the main role in increasing this type of information [4].

In recent years, new methods and technologies have emerged to enhance the translation process, addressing the limitations of traditional written and oral translations. These developments include advancements in machine translation, speech-to-text software, and artificial intelligence, all of which have contributed to more accurate and efficient translation practices [5].

Machine Translation and Neural Networks

One significant advancement is the use of neural networks in machine translation. Neural machine translation (NMT) systems, such as Google Translate and DeepL, utilize deep learning algorithms to improve the quality of translations. These systems can analyze vast amounts of bilingual text data, learning the patterns and structures of languages to produce more natural and accurate translations. The continuous improvement of NMT has resulted in translations that are closer to human quality, particularly for common language pairs. This technology significantly reduces the time required for translation and can be used to produce initial drafts, which can then be refined by human translators [6].

Speech-to-Text and Text-to-Speech Technologies

Speech-to-text (STT) and text-to-speech (TTS) technologies have also transformed the translation landscape. STT systems convert spoken language into written text, enabling real-time transcription and translation. This technology is particularly useful for scenarios where speed and immediacy are crucial,

such as live conferences or meetings. TTS, on the other hand, converts written text into spoken language, making translations accessible to a wider audience, including those with visual impairments or literacy challenges. The integration of STT and TTS technologies allows for seamless conversion between spoken and written forms, facilitating communication across languages in real-time [7].

AI-Assisted Translation Tools

Artificial intelligence (AI) has further enhanced translation efficiency through AI-assisted tools. These tools provide translators with suggestions and context-aware corrections, improving the accuracy and speed of the translation process. For instance, AI can identify idiomatic expressions and cultural nuances, offering appropriate translations that preserve the original meaning. Additionally, AI can help with terminology management, ensuring consistency across large translation projects. The combination of AI with human expertise results in higher quality translations that meet the specific needs of clients [8].

Analysis and results

According to the analysis of the literature, as a result of comparing written translation and visual (interpretation) translation, we came to the conclusion that there are two important differences:

The form of the translation product

The order of execution of the main processes.

Simultaneity of movements, all other things being equal, leads to major limitations in visual translation. In general, this is an interpretation, in which the formatting of the foreign language text is carried out in parallel with the flow of information through the visual channel. As with interpretation, the interpreter does not have the right to stop, ask again, or clarify. The option search phase cannot be separated from the overall process. More importantly, there is no way to cover a large part of the text to make the best decision when dealing with translation difficulties. The latter is a more complex type of translation in terms of the sum of operations performed by the translator in written translation and sight translation and in terms of their execution order.

Table 1

No.	Stages and features of types of translation	Written Translation	Oral Translation	Text-to-Speech Translation
1	Visual perception of the source text	Visual, extensive (simple)	Visual, extensive (simple)	Visual, extensive (simple)
2	Memory registration	Simple	Simple	Simple
3	Switching from one language to another	Unlimited time (simple)	Time-limited (complex)	Unlimited or conditionally limited time (simple conditional)
4	Creation of the target text	Written, minimal (simple)	Oral, non-repetitive (complex)	Oral, extensive (if necessary) (conditionally simple)
5	Sequence of processes	Sequential (simple)	Sequential (normal)	Simultaneous conditional (normal)
6	Time constraints	Conditionally absent (simple)	Yes (complex)	Conditionally none (normal)
7	Dictionaries, reference books, access to colleagues	Yes (simple)	Yes (normal)	Yes (normal)
8	Preliminary analysis of the source text	Yes (simple)	Yes (normal)	Yes (normal)
9	Choice of translation options	Yes (simple)	Yes (normal)	Yes (normal)
10	Editing	Yes (simple)	Yes (normal)	Yes (normal)

As can be seen from the above table 1, oral and written translation differ from each other by certain features. For example, in written translation, importance is mainly given to the morphological and syntactic structure of the text, while in oral translation, the main content of the source text is delivered to the listeners. In written translation, the translator implements the source text for a certain period of time based on various dictionaries, references, and exchange of ideas, while in oral translation, the translation process is carried out directly in a short time without analyzing the source text. In written translation, you can create several versions of the translation and edit them. There are no such possibilities in oral translation.

In oral and written translation, the possibilities of creating an alternative translation through the use of memory and visual perception of the source text are similar.

In both translation and oral interpretation, the psychological state is an important process for both types of translators.

In oral interpretation, a large part of the source text will be reduced in quantity and quality due to compression, and the listeners will not be able to fully understand the source text. In written translation, in addition to preserving the source text in terms of quantity and quality, it is also possible to enrich it with new words.

The second difference in the form of the product, in essence, does not cause significant limitations in any of the two types of translations under consideration. According to this indicator, everything speaks in favor of visual translation, which is faster because there is no need to do mechanical work on the keyboard. This was the starting point of our global research into the possibility of replacing written translation with visual translation using specialized speech-to-text software. The main idea is to transfer the mechanical work of typing the translated text to the computer without completely replacing the conditions for performing the written translation. In this case, the increased load on eye translation can be partially or completely removed by eliminating the need to simultaneously perform the processes of perceiving the source text and repeating the translation within a limited time interval.

Written translations differ from oral translations in the sequence of creating, editing, and creating the translation text. Examples of written translation sources are works of art, documents related to a certain field, scientific works, historical works, and essays.

Technical written translations are translations of texts containing specialized terminology, such as scientific articles, reports, instructions for use, and other specialized product information.

Public written translations include any necessary content or linguistic editing and proofreading. Quality translations should be ordered for websites and printed materials for public distribution. After the client has reviewed the translation, all necessary corrections have been made to the text, and the design (structure) of the text has been completed, the proofreading is done.

By literary translation, we usually understand the translation of texts of an artistic nature. In addition to literary works, artistic texts include poetry and prose advertising slogans, opera librettos, film scripts, etc. The correct transmission of these components requires a rich worldview, extensive experience on the part of the translator, and significant experience in the field. Each type of literary text has its own characteristics, and the following should be taken into account when translating:

Poetry (librettos of poems, songs, operas): The main task of the translator is to preserve the rhyme, prosody, and poetic dimension of the translation during the translation process.

Advertising slogans. Their translation requires a creative and inventive approach from the translator, rather than word-for-word transmission. It is very important to adapt the translation to the target audience.

Artistic prose (novels, short stories, articles, essays, etc.). This is the broadest layer of artistic texts. The significant size of many documents means that they contain a large number of tropes. In addition, the translator should take into account the phenomenon of the author's style, which covers several works at the same time.

The adoption of these new methods has led to several noteworthy results in the field of translation. First, the speed of translation has increased significantly. Machine translation and AI-assisted tools can process and translate large volumes of text much faster than manual translation, reducing turnaround times for translation projects. This is particularly beneficial for businesses and organizations that operate on tight schedules and need quick, reliable translations.

Second, the accuracy of translations has improved. Neural networks and AI technologies have made significant strides in understanding and replicating the nuances of human language, leading to translations that are more accurate and contextually appropriate. This has resulted in higher satisfaction rates among clients and end-users, as the translations better convey the intended meaning of the original texts.

Third, the efficiency of translation workflows has been enhanced. The integration of machine translation, STT, and TTS technologies into translation management systems allows for a more streamlined workflow. Translators can leverage these tools to handle repetitive tasks and focus on more complex aspects of the translation, such as ensuring cultural relevance and stylistic fidelity. This has led to increased productivity and reduced costs for translation services.

Furthermore, the combination of visual and auditory translation methods has created new possibilities for alternative translation processes. By using visual aids such as images and diagrams alongside audio translations, translators can provide a more comprehensive understanding of the source text. This multimodal approach is particularly effective in educational and instructional contexts, where learners benefit from multiple forms of input.

In conclusion, the exploration and implementation of alternatives to traditional written and oral translation processes have significantly enhanced accuracy and efficiency in the field. The integration of advanced technologies such as neural networks, AI, and speech-to-text systems has revolutionized the way translations are performed, resulting in faster, more accurate, and contextually appropriate translations. These advancements not only benefit translators and clients but also contribute to more effective cross-cultural communication in an increasingly globalized world.

Conclusions

In this article, we have explored significant advances in translation technology and methodology, highlighting their impact on the translation and interpretation processes. By examining the classic differences between written and oral translations and the alternatives that emerge, we can draw several key conclusions.

The integration of neural machine translation, speech-to-text and text-to-speech technologies has significantly increased the accuracy and efficiency of translation processes. Neural networks, in particular, have made translations closer to human quality, allowing for more natural and context-

accurate results. These advances significantly reduce the time and effort required for translation, and are beneficial for both translators and clients;

The use of artificial intelligence tools in translation workflows has simplified operations and allowed translators to focus on the complex and subtle aspects of the text. This has resulted in more consistent and high-quality translations, as AI provides valuable assistance in terminology management and context-aware corrections. The synergy between human experience and AI technology leads to superior translation results;

Speech-to-text and text-to-speech technologies have changed the landscape of real-time translation, enabling efficient solutions for live conferencing, meetings and other rapid communication needs. This has expanded the scope and usability of translation services, providing valuable solutions for various industries and scenarios where fast and accurate translation is required;

Combining visual aids with auditory interpretation techniques offers a comprehensive approach to understanding and conveying information. This multimodal strategy is particularly effective in teaching and learning contexts where students use different forms of information. This highlights the potential for more creative and effective translation practices that meet different learning styles and needs;

Cognitive processes involved in translation, such as memory and visual perception, play a crucial role in both written and oral translations. By using technology to eliminate repetitive tasks and manual work, translators can reduce cognitive load and focus on delivering high-quality translations. This shows the importance of considering psychological factors in improving translation practice;

In conclusion, the study of alternatives to the traditional written and oral translation processes reveals a promising future for the field of translation. Advances in technology not only improve the quality and efficiency of translations, but also open up new opportunities for creative and effective translation practices. Translators and clients can adopt these innovations to achieve more accurate, timely and context-sensitive translations, ultimately helping to advance global communication and collaboration.

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