LITERACY IN TRANSLATION: BETWEEN STRATEGIC COMPETENCE AND AI ASSISTANCE

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Abstract

The progress of translation has been greatly influenced by the breakthroughs in artificial intelligence (AI), which have posed challenges to conventional ideas of linguistic proficiency and strategic abilities. This article describes the dynamic interaction between human strategic proficiency and AI aid in the translation process. Effective translation relies heavily on the translator's strategic competency, which encompasses their skill in navigating linguistic and cultural intricacies. Nevertheless, the incorporation of artificial intelligence (AI) tools provides improved effectiveness, uniformity, and precision, potentially revolutionizing translational practices. This paper examines the ways in which AI-driven tools enhance the ability of human translators, as well as the additional issues they pose in terms of dependency, quality control, and ethical considerations. The analysis is based on a thorough examination of case studies and experimental data. The findings emphasize the need for a well-rounded strategy that utilizes the advantages of AI while preserving the invaluable worth of human perception and flexibility in translation. This research adds to the continuing discussion on the future of translation literacy by promoting a flexible framework that combines technological improvements with human expertise.

Keywords: Translation literacy; strategic competence; AI translation

Introduction

Translation has the greatest significance in connecting different languages and cultures in our ever more interconnected world. The capacity to speak in other languages promotes comprehension, collaboration, and interaction on a worldwide level. Translation is crucial in our interconnected culture as it enables people to overcome linguistic boundaries, facilitating access to information, idea sharing, and collaboration (Bielsa, 2005; Katan, 2009).

Conventional translation mainly depends on the experience of humans, specifically the translators' strategic skills. This competency pertains to their capacity to make decisions that are suitable for the given environment, utilizing extensive linguistic and cultural expertise (Weda, 2014). Human translators utilize their comprehensive comprehension of language to effectively and appropriately communicate meaning, taking into account aspects such as idiomatic expressions, cultural references, and the target audience. Their knowledge enables them to generate translations that are both precise and culturally appropriate, while also being contextually significant.

Nevertheless, the progress in artificial intelligence (AI) is revolutionizing translation procedures in unprecedented ways. AI techniques, such as Google Translate and neural machine translation (NMT) systems, have introduced both new opportunities and challenges in the field of translation literacy. These technologies are capable of efficiently processing vast amounts of data, which allows for rapid translations

and significantly enhances accessibility to information across different languages. The continuous development of AI in translation has led to increasingly sophisticated systems that can manage complex linguistic structures and cultural nuances with greater accuracy. Neural machine translation, in particular, leverages deep learning algorithms to improve the quality of translations by understanding context, syntax, and semantics more effectively. This ongoing advancement means that AI tools are progressively becoming more adept at handling intricate language patterns and cultural subtleties that were once considered the exclusive domain of human translators. However, alongside these advancements come challenges, such as ensuring the accuracy and contextual appropriateness of translations, and addressing the ethical concerns related to the reliance on AI in translation. As these technologies evolve, they are not only transforming the efficiency and scope of translation services but also prompting a re-evaluation of the role of human expertise in the translation process.

One of the most popular machine translation services, Google Translate, has changed a lot since it first came out. This is mostly due to progress in artificial intelligence (AI). Google Translate used statistical machine translation (SMT) to do languages when it first came out in 2006. In the beginning, this method involved looking at a huge amount of bilingual text to find trends and links between languages. These statistical models were then used to make translations. At the time, SMT was a very new way to translate, but the translations it made were often too literal and lacked nuance, which made them less dependable for texts with a lot of words.

When neural machine translation (NMT) was added to Google Translate in 2016, it was a big step forward. Deep learning methods are used in NMT to make translations better and more accurate. This is a big step forward in the use of AI for translation. NMT translates whole words at once, rather than phrase by phrase like SMT does. It does this by looking at the bigger picture to make translations that sound more natural and flow better. NMT can handle idiomatic phrases, slang, and different types of syntax better because it understands the context (Aldelaa, 2024). This makes the versions more natural and consistent with human speech.

Google Translate's NMT is based on artificial neural networks, which are meant to look like the way neurons are linked in the human brain. A lot of text in different languages is used to train these networks, which lets the system learn and identify complex language patterns. This is called "sequence-to-sequence learning," and it lets NMT models turn a source sentence into a number and then back into the target language while keeping the sense and context of the original text

The use of attention processes is a key part of Google Translate's NMT system. These features let the model focus on the important parts of the input line while translating, which makes the output more accurate and of higher quality. The model can better handle longer words and more complicated grammar structures because it can change its focus on the fly. Also, Google has kept making its NMT system better by adding new findings in AI study. For example, adding the Transformer design has made NMT models even more efficient and better at what they do. Transformers use self-attention mechanisms to process words simultaneously instead of one after the other. This makes the translation process go much faster and better handle long-distance relationships within sentences.

Another important change is that Google Translate can now work in a

multicultural environment. This means that there is no need for different models for each pair of languages because one model can translate between them all. This method not only uses fewer computer resources, but it also lets the model share information between languages, which makes translation better, especially for languages with few resources.

In the past few years, Google Translate has also added improvements to zero-shot translation and autonomous learning. These methods let the system translate between language pairs that it hasn't been specifically trained for. They do this by using traits and patterns that are shared between languages. Overall, the use of AI to improve Google Translate has turned it from a simple translation tool into a complex system that can translate well between a lot of different languages and situations (Gu, 2023). Continuous study and the addition of cutting-edge AI technologies keep Google Translate at the top of the field of machine translation, giving users translations that are more accurate and trustworthy.

As part of translation study, there have been many studies conducted by researcher related to this study. Moneus et al (2024) reveals that Human translation and AI translation are two distinct methods for translating text. Human translation involves a skilled translator who understands the cultural context and nuances of the text, while AI translation uses algorithms and large data. While AI is faster and more cost-effective, it may not always capture the cultural nuances of the text as accurately as human translation. Legal terminology and concepts may vary between jurisdictions, making AI translation tools less accurate. Therefore, skilled human translators are recommended for high-quality translations. AI translation may struggle with idiomatic expressions and metaphors, while human translation may provide higher quality translations.

Wang (2023) conducted a study on The Impacts and Challenges of Artificial Intelligence Translation Tool on Translation Professionals. The study found that AI translation in Chinese language needs improvement in logical expression, fidelity, and fidelity of the original language. English is linear, while Chinese is spiral and diverse in form. Chinese uses the active voice, emphasizing the subject, while English emphasizes the subject-predicate object. AI translations may be more efficient and accurate than human translations, but humans may struggle to beat AI translations in terms of accuracy. AI translations are also readable and acceptable to readers, with a focus on formal language and avoiding colloquialisms. AI is becoming increasingly sophisticated in language translation, impacting English translators.

This current study explores the point at which strategic proficiency in human translation and artificial intelligence intersect. This analysis describes the interactions, synergy, and sometimes disagreements between these factors. The review aims to provide a comprehensive understanding of the present status of translation literacy by analyzing the benefits and downsides of both human and AI translation. The goal is to stress AI's ability to improve the work of human translators while also emphasizing the critical role of human understanding in producing really efficient and delicate translations.

Methodology

This review adopts a qualitative approach, synthesizing findings from recent literature on translation studies, AI in language processing, and cognitive science. The sources include peer-reviewed journal articles, conference papers, and authoritative books published in the last decade. Key themes

identified in the literature are analyzed to provide a comprehensive overview of current trends, challenges, and opportunities in the field. The review also considers case studies and practical examples of AI-assisted translation to illustrate real-world applications and implications.

Finding and Discussion

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literacy. These technologies are capable of efficiently processing vast amounts of data, which allows for rapid translations and significantly enhances accessibility to information across different languages. The continuous development of AI in translation has led to increasingly sophisticated systems that can manage complex linguistic structures and cultural nuances with greater accuracy. Neural machine translation, in particular, leverages deep learning algorithms to improve the quality of translations by understanding context, syntax, and semantics more effectively. This ongoing advancement means that AI tools are progressively becoming more adept at handling intricate language patterns and cultural subtleties that were once considered the exclusive domain of human translators. However, alongside these advancements come challenges, such as ensuring the accuracy and contextual appropriateness of translations, and addressing the ethical concerns related to the reliance on AI in translation. As these technologies evolve, they are not only transforming the efficiency and scope of translation services but also prompting a re-evaluation of the role of human expertise in the translation process.

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Discussion
Strategic Competence in Human Translation
Strategic competence in human translation is the translator's capacity to efficiently navigate and manage the intricacies of language transmission in order to generate translations that are culturally appropriate, accurate, and coherent. This competency encompasses a variety of skills and knowledge that extend beyond mere linguistic proficiency, including cognitive strategies, problem-solving abilities, and a comprehensive comprehension of both the source and target cultures (Xiao & Zeng, 2023).

Strategic competence is fundamentally defined as the ability to identify and resolve translation issues that result from cultural specificities, contextual nuances, and linguistic differences (Albir, 2020). Human translators must be proficient in recognizing potential ambiguities or misunderstandings in the source text and selecting the most appropriate translation strategies to accurately convey the intended meaning. This frequently necessitates a profound comprehension of cultural references, colloquialisms, and idiomatic expressions that may not have direct equivalents in the target language.

The translator's capacity to implement a variety of translation

techniques and methodologies that are customized to the text and its intended audience is a critical component of strategic competence. For example, a translator may elect to use a more literal translation approach for technical documents in order to preserve precision, while a more adaptive, creative strategy may be employed for literary works to capture the original's emotional tone and stylistic nuances. The ability to produce translations that are not only accurate but also resonate with the target audience is a defining characteristic of a competent translator, which is characterized by adaptation and flexibility.

Yuliasri (2017) urged that there have been different classifications of translation techniques. Each technique has unique advantages and limitations. Thus, it cannot be applied to all types of translation work. There are 18 translation techniques proposed by Molina and Albir (2002) namely: 1) Adaptation, 2) Amplification, 3) Borrowing, 4) Calque, 5) Compensation, 6) Description, 7) Discursive Creation, 8) Established Equivalence, 9) Generalization, 10) Linguistic Amplification, 11) Linguistic Compression, 12) Literal Translation, 13) Modulation, 14) Particularization, 15) Reduction, 16) Substitution 17) Transposition, and 18) Variation.

According to Molina and Albir (2002), Modulation technique is translation strategy by modify perceptive, focus, or cognitive which related with source language. It is to change the point of view, focus or cognitive category in relation to the SL, it can be lexical or structural. For example the sentence *are you going to have a child?* Translate into *kamu akan menjadi Ayah, kan?*. In this case, google translate cannot adapt the technique of modulation in transition. The sentence *are you going to have a child* literally translated into *apakah kamu akan*

mempunyai anak as seen in the following :
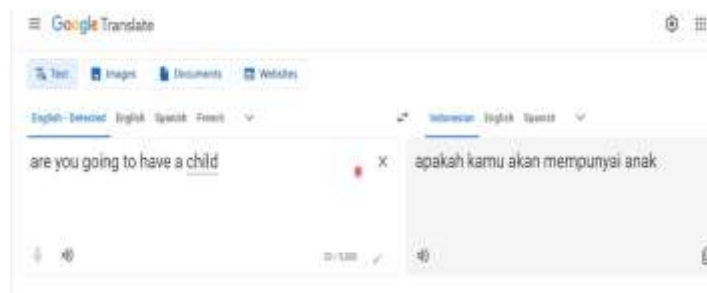
Picture 1. The process of translating in google

Furthermore, strategic competence necessitates proficient research abilities. Translators frequently encounter specialized terminology or enigmatic cultural references that necessitate a comprehensive investigation. It is essential to be adept at utilizing a variety of resources, including dictionaries, glossaries, and databases, as well as consulting subject matter experts, to guarantee the translation's accuracy and dependability. Verifying the authenticity of sources and comprehending the broader context in which the text operates are also components of this research process.

Cultural competence is an additional critical component of strategic competence. Translators must be aware of the potential impact of cultural elements on the translation and be receptive to cultural distinctions. This includes the ability to understand cultural norms, values, and expectations, which can significantly influence the interpretation of a message in the target language. For example, they frequently require meticulous adaptation to ensure that the intended audience comprehends and values humour, social customs, and historical references.

Additionally, strategic ability also means being able to keep an eye on the more practical parts of translation, like managing time, projects, and making sure they are translated

correctly. It is important for translators to be able to keep the quality of their work high while also meeting tight deadlines. This means that they have to go back and check their versions for mistakes and consistency issues. When working on big projects, they also have to work with other translators or editors.

Strategic competence in human translation is a multifaceted skill set that integrates practical knowledge, cognitive strategies, cultural awareness, and linguistic expertise. It allows translators to generate translations that are not only accurate and true to the source text, but also meaningful and suitable for the intended audience. This proficiency is indispensable for guaranteeing the success of translation initiatives in a variety of sectors, including academia, business, and diplomacy, as well as literature. Strategic competence in translation encompasses a translator's ability to apply linguistic knowledge and cultural understanding to produce accurate and contextually relevant translations. This competence involves several key skills:

1. Contextual Awareness: Understanding the cultural and situational context of the source and target languages.
2. Problem-Solving: Addressing ambiguities and resolving translation challenges creatively.
3. Adaptability: Adjusting strategies based on the nature of the text and the audience.

These skills are honed through experience and continuous learning, making human translators indispensable, particularly for nuanced and complex texts.

AI Assistance in Machine Translation

Machine translation is the integration of translation and computer science, specifically referring to the translation process performed by machines (Lin & Chien, 2009). Widiastuti et al. (2022) also urge that Machine translation refers to the process of automatically translating text without human intervention. Machine translation in routine operations typically entails the utilisation of computers and specialised software designed for machine translation. Throughout the translation process, the machine operates autonomously. The technology translates source text in a certain language into a designated target text.

The current version of Google Translate provides a wider range of alternatives compared to languages that are based on context. In order to enable users to ascertain certain goals or objectives. The explanation is that a single word can possess various meanings depending on the surrounding situation. Contextual translation is essential as not all users seek a strict response akin to that of a dictionary. Users have the ability to modify their preferences according on the specific circumstances or meaning of the words. Google Translate provides precise contextual responses, along with alternative expressions and local idioms. Xinxing Gu, the Product Manager of Google Translate, explicitly said this in a post on Google's official blog (Gu, 2023). AI has revolutionized translation by offering tools that can process vast amounts of text quickly and often with surprising accuracy. Key developments include:

1. Neural Machine Translation (NMT): NMT systems, such as Google Translate and DeepL, use deep learning algorithms to produce more fluent and coherent translations compared to earlier rule-based and statistical methods.
2. Real-Time Translation: AI enables real-time translation in various contexts, such as live events and customer service,

improving accessibility and communication efficiency.

3. Post-Editing: Human translators increasingly engage in post-editing AI-generated translations, enhancing speed while ensuring quality.

While AI tools excel in speed and consistency, they often lack the nuanced understanding required for certain texts, leading to errors in idiomatic expressions, cultural references, and context-specific meanings.

Complementary Roles

The integration of AI in translation is not about replacing human translators but augmenting their capabilities. AI can handle routine and repetitive tasks, allowing human translators to focus on more complex aspects requiring strategic competence. Effective collaboration between humans and AI can lead to:

1. Increased Efficiency: Translators can produce high-quality translations faster by leveraging AI for initial drafts.
2. Enhanced Accuracy: Human oversight ensures that AI translations are refined and contextually appropriate.
3. Broader Access AI-powered translation tools can democratize access to information by breaking down language barriers.

Challenges and Ethical Considerations

Despite the benefits, several challenges persist:

1. Quality Assurance: Ensuring the accuracy and appropriateness of AI-generated translations remains a critical concern.
2. Bias and Fairness: AI systems can reinforce biases found in training data, which can cause readings to be disconnected.
3. Professional Identity: The role of human translators is evolving, raising questions about professional identity and the future of the translation industry.

Conclusions

When strategy knowledge and AI help come together in translation, it opens up a wide range of opportunities and challenges. The speed and processing power of AI work well with human translators' deep knowledge of context and ability to solve problems. The translation business may be able to boost productivity and accessibility without lowering quality standards by using AI as a collaborative tool. To make sure that the relationship between human translators and AI is good for the field of translation, we need to keep studying and debating the ethical and professional issues that come up as technology improves. Mastering translation methods is also important for human translators to make sure that the translation is correct, makes sense, and is relevant to the culture. Translators need to know both the source and target languages, be able to deal with linguistic, cultural, and contextual details, and be able to work with different types of texts. Literal translation, transposition, modulation, and adaptation are some of the methods that translators use to deal with legal writings, idioms, and cultural references. Mastering these techniques ensures accurate, useful translations that go beyond simple conversion and capture the spirit of the original text.

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