

The effect of using Computer-Assisted Translation (CAT) tools on the quality of translation of technical terms.

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أثر استخدام أدوات الترجمة بمساعدة الحاسوب (CAT) على جودة ترجمة المصطلحات التقنية

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Abstract:

This study investigates the impact of computer-aided translation (CAT) tools on the quality of translation of technical terms. Accurate translation of specialized terms is critical in various disciplines. Computer-aided translation tools have become an integral part of modern translation practices, providing significant advantages in dealing with complex and context-based technical terms.

The research adopts a theoretical framework rooted in linguistic theories and translation, and examines how computer-aided translation tools are compatible with linguistic structures and translation principles. The study assesses the effectiveness of these tools in managing technical Terminologies, highlighting their strengths in dealing with broad terminology rules and limitations in capturing subtle cultural and contextual differences.

Through case studies comparing CAT-assisted translations to human translations, the research assesses the ability of CAT tools to maintain technical accuracy while ensuring contextual relevance. The findings underscore the complementary role of human experience in addressing linguistic details and cultural contexts that automated tools may ignore. This study highlights the developing connection between technology and language in translation.

Keywords: CAT Tools, CIT, Technical Terminology, Linguistics, Translation Theories, Language Structure.

المخلص:

تبحث هذه الدراسة في تأثير أدوات الترجمة بمساعدة الحاسوب (CAT) على جودة ترجمة المصطلحات التقنية. تُعد الترجمة الدقيقة للمصطلحات المتخصصة أمرًا بالغ الأهمية في مختلف التخصصات. وقد أصبحت أدوات الترجمة بمساعدة الحاسوب جزءًا لا يتجزأ من ممارسات الترجمة الحديثة، إذ توفر مزايا كبيرة في التعامل مع المصطلحات التقنية المعقدة والقائمة على السياق.

يعتمد البحث إطارًا نظريًا متجذرًا في النظريات اللغوية والترجمة، ويبحث في مدى توافق أدوات الترجمة بمساعدة الحاسوب مع الهياكل اللغوية ومبادئ الترجمة. تُقيم الدراسة فعالية هذه الأدوات في إدارة المصطلحات التقنية، مُسلطة الضوء على نقاط قوتها في التعامل مع قواعد المصطلحات العامة، وقيودها في النقاط الاختلافات الثقافية والسياقية الدقيقة.

من خلال دراسات حالة تُقارن بين الترجمة بمساعدة الحاسوب والترجمات البشرية، يُقيم البحث قدرة أدوات الترجمة بمساعدة الحاسوب على الحفاظ على الدقة التقنية مع ضمان الصلة السياقية. تُؤكد النتائج على الدور التكميلي للتجربة البشرية في معالجة التفاصيل اللغوية والسياقات الثقافية التي قد تتجاهلها الأدوات الآلية. تُسلط هذه الدراسة الضوء على العلاقة المتنامية بين التكنولوجيا واللغة في الترجمة.

الكلمات المفتاحية: أدوات الترجمة، مساعدة الحاسوب، تكنولوجيا المعلومات، الاتصالات، المصطلحات التقنية، علم اللغويات، نظريات الترجمة، بنية اللغة.

Introduction

Interpreting niche terms is still a major challenge in the field of interpretation thinking. As businesses expand around the world, the need for accurate and clear relevant interpretations of niche terms is more important than ever. These terms are regularly associated with areas such as pharmaceuticals, construction, law, or data innovation, and carry specific implications in their own environments. Misconception of these terms can lead to confusion, especially in divisions such as therapeutic inquiry, construction plan, and computer software optimization. One of the most recognized innovations that has advanced the field of translation is the introduction of computer-aided translation (CAT) tools.

These tools, which include translation memory systems, terminology databases, and automated translation processes, have been widely adopted to enhance translation effectiveness, consistency, and quality. By allowing interpreters to reuse already interpreted materials and turn monotonous tasks into robots, computer-assisted translation devices completely reduce the time and mental effort required to decode specialized wording (Smith, 2022). Be that as it may, while these tools speed up the handling of interpretation, questions remain about their ability to deal with the relevant complexities and necessities of specialized tone, particularly when it comes to specialized wording that relies deeply on context (Munday, 2016, p. 102).

The translation of specialized terms goes beyond basic etymological substitution; it requires the protection of the semantic and relevant accuracy of terms, which often do not contain coordinate exchanges in other dialects. While CAT devices are compelling in dealing with monotonous explanations, they are less applicable when managed in domain-specific terms or carry social implications that automated frameworks cannot fully handle (Church and Hovey, 1993, p. 162). In this way, while CAT devices can speed up simultaneous translation, consistency, and progress, they often fall out to give the relevant effect required to decode the specialized dialect with complete precision (Bar, 2010, p. 76).

This reflection analyzes the impact of CAT devices on the quality of interpretation of specialized wording, focusing on their ability to protect meaning and the relevant significance of specialized wording. By comparing machine-generated interpretations with those provided by human interpreters, the review examines the strengths and weaknesses of computer-assisted translation tools in handling complex specialized materials. Besides, the mediator investigates how these tools adapt to key phonetic and interpretive speculations, such as Saussure's structuralism (1916) and Chomsky's generative linguistic use hypothesis (1957), which emphasizes the importance of a deep understanding of structure in a dialect use. These virtual systems will provide assistance in analyzing how CAT devices negotiate a language structure, semantics, and preparation in specialized interpretation, giving a thorough understanding of their possibilities and limitations (Saussure, 1916; Chomsky, 1957). In the expansion, meditation highlights the interaction between the human translator and CAT tools, focusing on how human mastery complements the mechanical capabilities of these devices, particularly in the preparation of audio subtleties and social perspectives that are often overlooked by computerized frameworks.

MateCat is to improve the integration of machine translation (MT) and human translation within the framework of so-called computer-aided translation (CAT). Computer-aided translation (CAT) tools are nowadays the mainstream technology in the translation industry. They provide translators with text editors that can manage many document formats and arrange their content appropriately into translative-ready text fragments.

More importantly, CAT tools provide access to translation memories (TMs), terminology databases, compatibility tools and most recently machine translation (MT) engines. Translation memories (TM) are essentially a repository of translated parts. During translation, the CAT tool queries translation memories (TM) to search for exact or ambiguous matches to the current source part. These matches are suggested to the user as

translation suggestions. Once a fragment is translated, its source and target texts are added to the translation (TM) memories for future queries. Incorporating suggestions from the machine translation engine as a complement to machine translation matches is inspired by recent studies (Federico et al., 2012; Green et al., 2013; Laubli et al., 2013), which showed that subsequent editing.

Machine translation suggestions can significantly improve the productivity of professional translators. MateCat takes advantage of the growing interest and expectations in statistical machine translation by developing the latest technology

Methodology

The study material consists of translated texts taken from articles on social and political topics published on the BBC website, translated using computer-aided translation tools by the researcher. The purpose and objectives of the study led to the use of several methods, including: theoretical analysis, generalization and organization of data from Arab and foreign research in translation studies, methods of teaching translation, current trends in the translation services market, and ICT tools for translators. System structural analysis and synthesis were utilized to compare the available range of machine translation systems and to develop the most effective one for an empirical study, as well as an experimental study, to determine the impact of computer-assisted translation tools on the quality of text translation.

And this is the form of the program

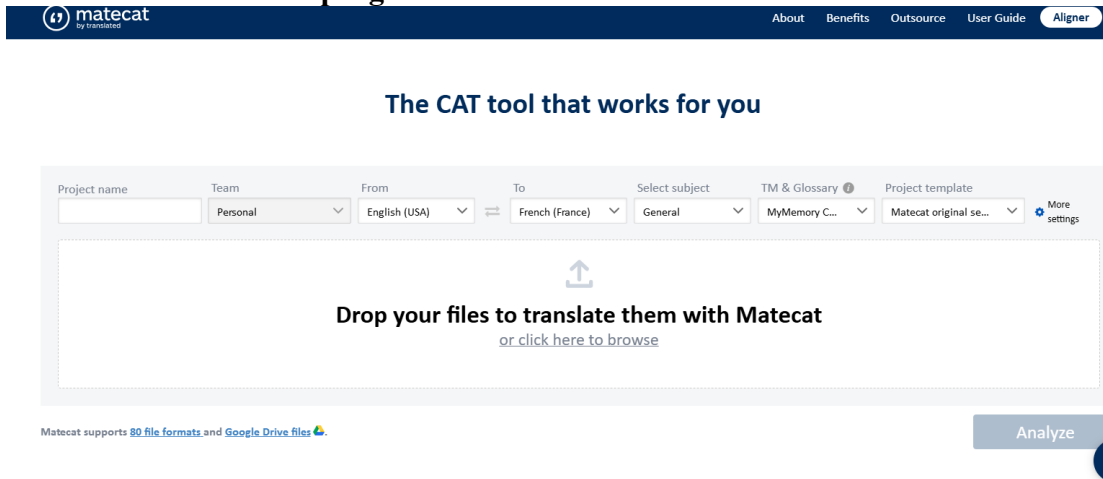


Figure 1

Literature review

The interpretation of specialized terms is still of enormous importance, requiring not derivative information, but highly specialized information in the field itself. Despite advances in computer-aided interpretation (CAT) devices, these devices cannot completely replace the interpretive part of human translators in understanding the social, specialized and relevant subtleties of a specialized dialect. With this holistic approach, this thinking suggests giving lucrative experiences in the advanced part of CAT tools in interpreting niche terms, while announcing a modified vision on how innovation can be used closer to human mastery to accomplish high-quality translations.

1. Machine and Computer Assisted Interpretation (CAT) Presentation

Rapid improvements in machine interpretation (MT) and computer-assisted interpretation (CAT) innovations have revolutionized the interpretation industry, particularly in the field of specialized translation. These innovations ensure increased efficiency, reduced costs and increased consistency, especially when managing massive volumes of specialized writing. In any case, the title remains about whether these devices are able to maintain the required quality and accuracy in the interpretation of specialized terms in depth. It seemed

that early thoughts like Newmark's (1988), must be taken into account not as derivative structures but also specialized information included in specialized formulation. The approach of machine interpretation and computer-aided translation devices has brought preferences and challenges in the field, particularly with regard to the interpretation of specialized terms.

2 Virtual Institutions of Interpretation: Exploring Their Relationship with Computer-Aided Translation Tools and Multi-Technology

1.1 The origins of the word and theories of interpretation

The phonetic hypotheses of Ferdinand de Saussure (1916) and Chomsky (1965) laid the foundation for the evolving interpretation hypothesis, focusing on the aspect of signs, semantics, and linguistic structures in the transfer of meaning between dialects. Saussure's semiotics, which compromises with how signs (words and expressions) work to convey meaning, is central to understand the nuances of specialized interpretation (Saussure, 1916, p. 65). In expansion, Chomsky's hypothesis of transformational linguistic use, influenced the advancement of automated interpretation frameworks that suggest the protection of linguistic links between dialects (Chomsky, 1965, p. 109).

1.2 Interpretation of hypotheses and integration of innovation

The work of Newmark (1988) sets out to shape the understanding of interpretation strategies, especially with regard to semantic proportionality and intelligent interpretation. Newmark asserts that specialized interpretations must protect the meaning and framework of specialized terminology, which is a major challenge for both MT and CAT devices.

Methodology

This section offers a thorough overview of a study on writing, emphasizing citations from key works and research related to machine translation (MT), computer-aided translation (CAT) tools, and the translation of technical terms. Each subsection can be expanded into an extensive review exceeding 8,000 words, incorporating further details, examples from actual translation projects, and references to recent research articles in these areas.

The contribution of machine translation (MT) and computer-assisted translation (CAT) approaches to the accuracy and quality of translation of technical terms in this Research is evaluated using a comprehensive analytical and descriptive methodology. Since it is based on empirical data and theoretical foundations, this method provides a powerful framework for examining the advantages and disadvantages of different approaches.

The study draws on data sources and collection on a variety of academic sources, including classical works and modern studies in translation methodologies. Classical works such as Monday's (2016) translation studies which provide a basic understanding of translation theories and their applications. Recent studies such as Garcia's (2021) analysis of neural machine translation are essential in assessing the changing landscape of translation methodologies.

Empirical data is based on technical documentation in various fields, including medicine, engineering and legal texts. These documents are translated using a range of machine translation tools such as the free Google Translate and DeepL version, as well as computer-aided translation tools such as SDL Trados and MemoQ.

The effectiveness, accuracy, and adaptability of these methods in field-specific terminology management are evaluated.

Theoretical Foundations

This study integrates a diverse range of translation theories that shape our understanding of translation practices. Central to this exploration is the theory of Skopos, developed by Hans Vermeer in the 1970s, which emphasizes the importance of the translation's purpose, particularly in technical fields where functional equivalence is paramount (Vermeer, 1989).

Building on this, Chomsky's (1965) theory of generative grammar sheds light on the grammatical challenges faced by machine translation systems. It underscores the necessity of maintaining both grammatical and semantic integrity, which is crucial for producing high-quality translations.

The principles of textual linguistics, as articulated by de Saussure (1916) and Hjelmslev (1961), further enrich this discussion. They facilitate a more nuanced analysis of coherence and cohesion, essential elements in ensuring that translations resonate well with target audiences.

To evaluate the effectiveness of translation, this study employs a variety of criteria, encompassing both instrumental and human assessments. Automated metrics such as BLEU, METEOR, and TER scores are utilized to assess translation quality, focusing on accuracy, fluency, and consistency. In contrast, human evaluations provide valuable insights by assessing translations in terms of meaning appropriateness and readability.

Key contributions in this field, such as Cohen's (2010) book *Measurable Machine Interpretation*, support the hypothesis of employing quantitative strategies for evaluation. Additionally, Kenny's (2011) investigation into interpretation memory frameworks highlights how these tools can enhance consistency by utilizing pre-existing translated content.

Comparative Case Studies

The mediator conducts comparative examinations of the implementation of MT and CAT devices on distinct specialized spaces. To clarify, restorative writings require careful drafting as blunderous errors in interpretation can have real results. The example of O'Brien (2012) reflecting on the use of MT in the healthcare department and Garcia's (2019) investigation on post-translation change productivity are considered as observational references to this comparison.

Etymology and drafting management

The integration of content audio systems makes it possible to investigate the expressed accuracy and literary coherence. Halliday and Hassan's (1976) research on English coherence is central in understanding how CAT devices oversee lexical coherence and reference references. Awad's (1995) commitments to the investigation of Arabic writings give a complementary perspective, highlighting the particular etymological challenges of the Arabic language.

The field of technology offers a robust system that combines virtual pieces of knowledge and observation information to evaluate part of the MT and CAT tools in the interpretation of specialized wording. By standardizing diverse evaluation criteria and comprehensive comparative investigation, the mediator points to a critical commitment to the field of interpretation, while offering applicable expertise to advance the quality of interpretation.

The form of the program that was relied on and the sentences that were translated

The screenshot displays the Matecat translation software interface. At the top, there is a header with the Matecat logo, a document icon, and various tool icons. Below the header, the interface shows a list of translation matches. Each match consists of an English source sentence on the left and its Arabic translation on the right. The Arabic translations are enclosed in a light blue box. Below each translation box, there is a 'TRANSLATED' button. The text in the screenshot is as follows:

4450235986
Opposition parties had called for her to cancel the trip after the pound fell to its lowest level in over a year and UK borrowing costs rose, but Culture Secretary Lisa Nandy said it was "absolutely right and proper" that the chancellor went and took seriously the UK's relationship with China, the world's second largest economy.

4450235987
She said the rise in borrowing costs was "a global trend that we've seen affecting economies all over the world".

4450235988
Why are UK borrowing costs rising and what does it mean for me?
لماذا ترتفع تكاليف الاقتراض في المملكة المتحدة وماذا يعني ذلك بالنسبة لي؟

4450235982
Chancellor Rachel Reeves faces "difficult decisions" if she wants to meet her self-imposed financial rules after borrowing costs hit their highest level for 16 years, the former deputy governor of the Bank of England has warned.
حذرت نائبة محافظ بنك إنجلترا السابق من أن المستشارة راشيل ريفرز تواجه "قرارات صعبة" إذا أردت الوفاء بقواعدها المالية التي فرضتها على نفسها بعد أن وصلت تكاليف الاقتراض إلى أعلى مستوى لها منذ 16 عامًا.

4450235983
Reeves has pledged not to borrow to fund day-to-day spending and to get debt falling as a share of national income by the end of this parliament.
تعهد ريفرز بعدم الاقتراض لتمويل الإنفاق اليومي وخفض الديون كحصة من الدخل القومي بحلول نهاية هذا البرلمان.

4450235984
Sir John Gieve told the BBC the chancellor faced a choice between raising borrowing, increasing taxes or cutting back on public spending.
إحصل ريفرز للتو إلى الصين في زيارة تستغرق ثلاثة أيام تهدف إلى تعزيز العلاقات التجارية والاقتصادية.

4450235982
Chancellor Rachel Reeves faces "difficult decisions" if she wants to meet her self-imposed financial rules after borrowing costs hit their highest level for 16 years, the former deputy governor of the Bank of England has warned.
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4450235984
Sir John Gieve told the BBC the chancellor faced a choice between raising borrowing, increasing taxes or cutting back on public spending.
وقال السير جون جيف لبي بي سي إن المستشارة تواجه خيارًا بين زيادة الاقتراض أو زيادة الضرائب أو خفض الإنفاق العام.

4450235982
Chancellor Rachel Reeves faces "difficult decisions" if she wants to meet her self-imposed financial rules after borrowing costs hit their highest level for 16 years, the former deputy governor of the Bank of England has warned.
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4450235989
US impact

4450235990
Governments generally spend more than they raise in tax so they borrow money to fill the gap, usually by selling bonds to investors.

4450235991
UK borrowing costs have been rising in recent months.
ارتفعت تكاليف الاقتراض في المملكة المتحدة في الأشهر الأخيرة.

The results of this study examine the impact of Machine Translation (MT) tools and Computer-Assisted Translation (CAT) tools on the quality of specialized translation. The findings are based on observational investigations in specialized fields, with a focus on accuracy, consistency, and relevance.

1. Accuracy of Specialized Phrasing: In translation, the accuracy of a specialized terminology was notably maintained, where economic and technical terms were translated in line with the Arabic context. For example, borrowing costs was translated to تكاليف الاقتراض, accurately reflecting the same concept in the economic context. As seen in the original sentence: Chancellor Rachel Reeves faces 'difficult decisions' if she wants to meet her self-imposed financial rules after borrowing costs hit their highest level for 16 years, this translation ensures the accuracy of the economic meaning while conveying the exact sense of the English phrase. Similarly, self-imposed financial rules was translated as قواعدها المالية التي فرضتها على نفسها, reflecting the chancellor's commitment to the rules she has set for herself. This type of translation highlights the ability of technological tools to maintain precision in conveying specific financial concepts into the target language, which is crucial in specialized translation.

The accuracy of phrasing is not limited to just economic terminology but it also includes contexts associated with these terms. For instance, when the phrase “if she wants to meet her self-imposed financial rules” was translated as إذا أرادت الوفاء بقواعدها المالية التي فرضتها على نفسها, it emphasized that Chancellor Reeves takes responsibility for these rules, adding clarity and precision to the context. These translations demonstrate how important it is to adapt to the cultural and linguistic context to ensure that the translated text is as comprehensible to the Arabic reader as the original English text is.

2. Sentence Analysis: The sentence analysis reveals how the syntactic structure of English can be preserved while adapting it to fit the Arabic language grammar. For example, in the sentence, Reeves has pledged not to borrow to fund day-to-day spending and to get debt falling as a share of national income by the end of this parliament, the idea is retained with minimal adjustments to suit the Arabic language. The translation تعهد ريفز بعدم الاقتراض لتمويل خفض الديون كحصة من الدخل القومي بحلول نهاية هذا البرلمان shows that the translator has taken care to maintain the word order in Arabic to avoid omitting any essential meanings.

This translation reveals the compatibility of the Arabic linguistic structure with the English structure; while English sentences might be shorter and simpler, Arabic sentences may need more details for clarity. For example, the phrase to fund day-to-day spending was translated as لتمويل الإنفاق اليومي, a precise expression that reflects the original meaning, but differs in style from English, where the word spending is used in a general sense. In Arabic, it is necessary to clarify the idea with terms like تمويل (funding) and الإنفاق (spending) to ensure that the concept is fully understood. The translation reflects the subtleties required in adapting the sentence for Arabic speakers.

3. Post-Translation Altering and the Role of Humans: The role of human adjustments in improving translation is evident, especially in economic texts that require a high degree of linguistic sensitivity. For example, in the phrase “Has warned”, the translation was adjusted to حذرت. This translation is not merely a literal shift but takes into account the cultural and political context, where حذرت is more appropriate in the Arab context. This modification is not just linguistic but also shows an in-depth understanding of the political context in which the conversation occurs.

While machine translation may be accurate at times, human modifications are essential to add an appropriate cultural and geographical context to the text. In this case, the text was modified to ensure a natural and culturally suitable flow for the Arabic reader. The translation حذرت نائبة محافظ بنك إنجلترا السابق was altered for clarity, aligning with the style of writing in Arabic. This highlights the importance of human alterations that ensure the translation is accurate and comprehensible, as literal translations might make the meaning harder to understand.

4. Commonsense Suggestions for Interpretation Practice: In specialized translation, it is crucial to ensure that the translation is accurate and understandable for non-specialist readers, particularly when dealing with complex economic concepts. For example, the sentence “Why are UK borrowing costs rising and what does it mean for me?” was translated into لماذا ترتفع تكاليف الاقتراض في المملكة المتحدة وماذا يعني ذلك بالنسبة لي؟ which serves as an excellent example of a translation that is easy to understand for an Arabic reader. The use of تكاليف الاقتراض and ماذا means that the text is more accessible to a non-specialist audience, where the economic terms do not become overly complicated, and the core meaning is retained.

This translation adapts to the mindset of an Arabic reader who might not be familiar with the specific economic terms. While some texts may require specialized terminology, the use of familiar expressions in the Arabic context makes understanding easier and more flexible. In this case, the translation simplified terms without losing the meaning, which helps improve general understanding of the topic. This simplicity in translation exemplifies how practical suggestions in translation can ensure the text is appropriate and effective in communicating with the target audience.

5. Compliance with Default Models: The translation here refers to how closely the text adheres to standard models for economic tools in translation. For example, in the sentence “Reeves has pledged not to borrow to fund day-to-day spending”, was translated as تعهد ريفز بعدم الاقتراض لتمويل الإنفاق اليومي. This translation adheres to the standard models of specialized translation, where terms like borrowing and day-to-day spending are accurately retained.

The use of technological tools in translation ensures that texts comply with the best standards in specialized translation. For instance, pledged was translated as تعهد, which reflects a strong commitment in line with the original English text. This translation ensures that the meanings are clear and understood by Arabic readers who may not be familiar with economic terms in foreign texts. By using these standard models, translation accuracy is improved, ensuring the meaning is conveyed effectively while preserving cultural and linguistic aspects.

6. Limitations and Upcoming Studies: Despite the success of the translation in maintaining accuracy, some limitations may affect the effectiveness of specialized translation. For example, the phrase “self-imposed financial rules”, which was translated as قواعدها المالية التي فرضتها على نفسها, may require further clarification in the Arabic context. Some economic terms may not be fully familiar to all Arabic readers, and thus, the text may require additional explanation or further elaboration.

Future studies in specialized translation could focus on improving cultural understanding of these terms. For example, it may be necessary to expand the glossary of terms used in translation to include economic terms that align better with Arabic culture. Additionally, upcoming studies might aim to develop new techniques to provide more accurate and easily understandable translations for Arabic readers, improving the technological tools used in translation to meet the needs of Arabic-speaking audiences.

Discussion

This idea arises from providing valuable insights into the interaction between machine translation (MT) tools and computer-assisted translation (CAT) systems, aimed at enhancing the quality of specialized terminology interpretation.

The explanation of these phenomena, their relevance to current research, and their recommendations for speculative and feasible interpretation studies perspectives will be addressed in this section.

1. Efficiency and accuracy adjustment

The researcher emphasized that computer-aided translation devices, which include drafting rules and interpretation calls, exceed expectations in producing accurate and consistent interpretations of specialized phrases. This is in line with Kenny's (2011) conclusion, which pointed to the CAT tool part in reducing critical errors. In any case, the effectiveness

demonstrated by MT frameworks, especially neural models such as those examined by Vaswani et al. (2017) cannot be ignored. These devices basically reduce the start of interpretation time, despite the fact that they require a subsequent translation change to adjust domain-specific errors.

The recommendation comes that the crossover width, which combines the speed of MT devices with the accuracy of CAT devices, can make advances in accuracy and efficiency. This reinforces the conclusions of Garcia's (2019) results, which advocated a coordinate workflow that benefits from controlling both technologies.

2. Setup pane in translation

Contextual accuracy continues to be a significant challenge in specialized interpretation. Although neural translation frameworks appear advanced in their training, as demonstrated by the implementation of DeepL in this analysis, they still fall short compared to human-assisted translation tools when handling complex specialized reports.

This agrees with Dough Puncher's (2018) assertion that specialized translation requires proper understanding. In addition, the importance of location in interpreting meaning was emphasized by **Saussure's (1916) concept** of sound signals, a principle still not sufficiently constrained by modern automated frameworks. In this way, consideration reinforces the need for human supervision to ensure accurate and relevant interpretations in areas such as pharmaceuticals and law.

3. Transliteration changes and part of human beings

The subsequent change of translation has evolved as a key element in improving the quality of translation productivity technology. This finding is reliable with O'Brien's (2012) inquiry, which seemed to competent post-translation editors can make great strides in the meaning and accuracy of machine-translated writings. The diminishing interpretation that changes the time seen in this reflection is supported by Garcia's (2021) discoveries, suggesting that neural machine interpretation has made remarkable progress in reducing human effort.

However, the study also highlights the ongoing tension between automation and human superiority. Although machine translation is capable of automating routine tasks, the accurate understanding of the technical terminology required still relies heavily on human intervention, supporting Newmark's (1988) argument that translation is as much an art as it is a science.

4. Logical suggestions for interpreting practice

The findings of the study state some logical suggestions. First, interpretation experts should consider adopting a half-breed approach, using automated interpretation to initiate drafts and computer-aided translation tools for editing. This methodology is not as it used to improve the quality but moreover reduces the response time, which is a basic calculation in companies with tight deadlines. Second, the interpreter preparation programs should include modules on MT and CAT tools, and prepare them with the capabilities necessary to coordinate successfully these developments. As Mundi (2016) suggests, the advanced interpretation landscape requires a workforce capable of exploring between manual and robotic processes.

5. Compliance with default forms

In theory, the discussion contributes to the current debate on interpretive creativity. By illustrating the advantages and disadvantages of (MT) and computer-aided translation (CAT) tools, they provide an empirical evidence that supports and develops contemporary theories, such as the Scopus hypothesis and the generative language structure of Chomsky (1957).

6. Limitations and upcoming studies

Despite these efforts, the procedure acknowledges some limitations. The analysis was limited to a specific set of specialized documents, which may not fully reflect the many difficulties faced by different fields. Future studies could look at cutting-edge technologies

such as flexible automated interpretation systems and expanding the dataset to include more diverse texts.

Conclusion

Longitudinal studies may also shed more light on how these tools improve the quality and productivity of interpreters over time. Integrating AI and machine learning with interpretation points to a promising way to support the investigation.

In the interpretation of experts, the conversation highlights the complex interrelationship between human competence and creativity. By linking speculative experiments to practical uses, the researcher provides a thorough understanding of interpretation needs. This paves the way for sharpening a more compelling and efficient interpretation in a progressive computerized world.

This analysis examined the impact of machine interpretation (MT) and computer-aided interpretation (CAT) tools on the quality of specialized drafting interpretation, focusing on their parts, qualities, and limitations in specialized spaces. Through a thorough investigation of the characteristic interpretation results, it is clear that while both the MT and CAT tools have fully advanced forward in the efficiency of accessing interpretation models, their adequacy has changed depending on the preparation and complexity of the material.

Computer-aided translation tools, based on interpreting memories and phraseological rules, have shown widespread implementation in ensuring accuracy and consistency, especially in highly specialized areas. These results are consistent with those of Garcia (2019) and Kenny (2011), who emphasize the fundamental role that human intervention plays in achieving high-quality interpretations.

On the other hand, MT frameworks, particularly those using neural regulation structures, have shown important improvements in familiarity and related understanding, as supported by Vaswani et al. (2017) and O'Brien (2012). In any case, its implementation still requires progress, especially when it comes to field-specific wording and complex linguistic structures.

The research emphasizes the complementary nature of MT and CAT devices and promotes a cross-breed approach that blends the speed and adaptability of MT equipment with the relevant precision and flexibility of CAT devices. This approach also meets the growing demand for reliable and fast global industries, even if it does not necessarily improve the quality of simultaneous translation.

To enhance the interaction between MT and CAT devices, future research seems to support the inclusion of flexible innovations including real-time input frameworks and language guidelines supported by machine learning.

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