



The Translator's Role in the Age of Artificial Intelligence (AI): A Case Study on Post-Editing a Religious Tourism Brochure

Le Rôle du Traducteur à l'Ere de l'Intelligence Artificielle (IA) : Etude de Cas sur la Post-édition d'une Brochure de Tourisme Religieux

Cherifa BELHOUTS ¹

Mohamed Bougara University of Boumerdes | Algeria
ch.belhouts@univ-boumerdes.dz

Abstract : This study investigates how human post-editors intervene in machine-translated texts, focusing on a religious tourism corpus translated by an AI tool. The findings indicate a shift from translators as producers in traditional translation to controllers in the age of AI, while skills from traditional translation practices remain essential in the post-editing process. Effective post-editing of religious tourism texts requires fewer linguistic corrections and more culturally oriented strategies. This shift reshapes the translator's tasks and creates opportunities for creativity.

Keywords: AI-assisted translation, post-editing, translator's role, religious tourism, culture

Résumé : Cette étude examine l'intervention des post-éditeurs dans la traduction automatique, en s'appuyant sur un corpus de tourisme religieux traduit par l'intelligence artificielle. Les résultats mettent en évidence l'évolution du rôle de traducteur, considéré dans la traduction traditionnelle comme producteur, vers celui de contrôleur à l'ère de l'IA, tout en soulignant que les compétences issues de la vision traditionnelle de la traduction restent essentielles dans le processus de post-édition. Une post-édition efficace de textes touristiques religieux exige moins de corrections linguistiques et davantage de stratégies culturellement orientées. Cette évolution redéfinit les tâches du traducteur et ouvre des perspectives à la créativité.

Mots-clés : traduction assistée par IA, Post-édition, rôle du traducteur, tourisme religieux, culture



In today's world, artificial intelligence (AI) is increasingly integrated across disciplines, reshaping the responsibilities of both humans and machines. In translation, the shift from exclusively human translation to machine translation (MT) has been rapid (Sen, V. S., & Jamwal 2024), driven by advances in technology and growing industry demands. The role of the human translator -long regarded as an indispensable component and a central focus of translation studies- is undergoing significant changes in both required competencies and working processes. One emerging development is post-editing, a relatively new professional task that involves revising and refining MT output to

¹ Corresponding author: CHERIFA BELHOUTS | ch.belhouts@univ-boumerdes.dz

produce a high-quality target text. Despite the growing relevance of post-editing, previous studies rarely adopt a corpus-based approach to address specialized domains such as religious tourism brochures, which demand a high level of cultural and spiritual sensitivity. To the best of our knowledge, only one study conducted by Sodiq et al. (2020) has examined this text type, focusing on translation techniques for cultural issues in Indonesian religious tourism brochures translated into English. However, it does not address machine translation or post-editing practices. Given that MT quality in tourism texts varies considerably, human intervention remains essential to ensure both accuracy and cultural appropriateness (Fuentes-Luque et Santamaría Urbieta, 2020). Furthermore, existing studies have not sufficiently explored the evolving role of the translator in post-editing, particularly the adaptation of traditional translation theories to new AI-mediated workflows. The specific challenges of post-editing –especially for culturally sensitive texts— are not sufficiently explored, leaving a gap in understanding how translators intervene and maintain cultural integrity under these new conditions.

This study aims to address these gaps by examining how the translator's role shifts from author to post-editor in the context of religious tourism brochures. Using a corpus-based approach, it analyses the interventions made when revising MT outputs of culturally sensitive texts, combining insights from traditional translation theories with the capabilities of modern AI tools in the age of AI.

The study addresses the following research questions:

1. To what extent does the post-edited target text differ from the raw machine translation output, and how do human post-editors intervene to ensure cultural/religious appropriateness?
2. What is the role of the translator in post-editing culturally sensitive texts such as religious tourism brochures, and what new tasks and challenges does this role involve compared to traditional human translation processes and principles?

To answer these questions, this paper adopts a qualitative research approach to explore the way translators intervene. It first presents a theoretical exploration of the translator's role in post-editing. It then analyses samples from a religious tourism brochure, comparing the machine-translated output with the post-edited text and examining the ways in which translators intervene within AI-mediated translation workflows.

1. Review of literature

1.1 Classical insights on the translator's role in traditional theory

The translator's role has long been viewed as an essential component in the translation process. Traditional theorists emphasized this importance; for example, Nida (1969) highlighted the multifaceted role of the translator as the receptor of the source text, the producer of the target text, and again the initial receptor of the target text, seeking to anticipate the target reader's response to achieve an equivalent effect. Likewise, Newmark (1988) stressed the role of the translator in determining the intention of the source text and the way it is written, characterizing its readership, and deciding how much attention to give to target language readers “for the purpose of selecting a suitable translation method” (p.11). According to Vermeer (2000), the translator is the creator of a new text with decisions guided by the purpose of the target text in translation (skopos)

which “expands the possibilities of translation, increases the range of possible translation strategies” (p. 231). Such strategies are considered as solutions to translation problems, mainly lexical, grammatical, and stylistic ones (Ghazala, 2008).

1.2 Technological shifts in translation

However, the rise of artificial intelligence (AI) technologies has brought about a profound transformation in the translation profession. Consequently, the role of the translator is undergoing significant shifts, challenging traditional insights and reshaping both reception and production processes. This shift is driven by the progress in machine translation technologies and industry demands to reduce costs (Çetiner, 2021; Alvarez-Vidal et al., 2020).

1.2.1 The evolution of machine translation

Initially, translation shifted from manual translation to traditional machine translation. Traditional MT includes two parts: the first one is Rule-Based Machine Translation (RBMT) and the second one is Statistical Machine Translation (SMT). Then, Neural Machine (NMT) translation has been taking place using deep neural networks; “while older models were limited by their dependence on rules or statistical probabilities, generative AI systems, particularly NMT and models like GPT, generate translations that are more fluent, natural, and closer to how humans communicate. This evolution has led to fewer errors in complex text structures” (Chen, 2024: p.3).

1.2.2 New translator tasks

These developments influence the role of translators, moving from producers to controllers of machine generated target text. Thus new tasks and challenges are to be faced by translators. Chen (2024) stated three main tasks undertaken by translators: post-editing, quality assurance, and data management.

Although some translators view post-editing negatively because it reduces their income and alters their work practices (Alvarez-Vidal et al., 2020), research suggests that MT Quality Estimation (MTQE) tools can enhance post-editing efficiency in favour of translators (Béchara et al., 2021). In this context, it is suggested that post-editing increases efficiency but also influences perceptions of quality. These findings highlight the need to reconsider new skills and competencies of translators.

According to Allen (2001), post-editors involve revising, modifying, correcting, and improving machine translation output. Likewise, Chen (2024) states that the integration of AI into translation practice is reshaping the profession, viewing translators as proactive participants, curating outputs to ensure contextual appropriateness and ethical soundness rather than being just passive agents responding to automation:

In the digital age, translators are expected to possess not only linguistic expertise but also technical skills, such as the ability to work with AI-driven tools. This new paradigm requires translators to collaborate with machines, ensuring that the outputs generated by AI meet the necessary standards of accuracy, style, and cultural appropriateness (p. 2).

Supporting this notion, Lukasik's (2024) survey of Polish translators and students indicates that, while automation raises concerns, many view it positively, seeing it as evolving the professional roles through new tasks and creative functions. The future of translation likely

involves collaboration between human translators and AI, with humans focusing on cultural mediation and creative adaptation (Cheng, 2024). This ensures creativity which remains a central skill in post-editing particularly in culturally loaded texts. For this reason, it is indicated that these skills are essential and should be taught to future generations of translators (Wang, 2024).

1.3 Post-editing

Despite the growing integration of AI in translation, Prior studies on post-editing are limited, and most are descriptive. Çetiner et al. (2021) highlight the need to re-evaluate the sustainability of the translation profession, stressing the need to translators to manage meaning, context, and cultural issues as AI still struggles with these aspects.

Similarly, Chen (2024) highlights the quality and cultural relevance of translations, “Cultural fluency, language mastery, and the ability to interpret context and nuance are areas where AI still lags behind human translators, and these competencies will remain essential even in an AI-dominated industry” (Chen, 2024: p.6).

Allen (2001) briefly refers to post-editing guidelines, but does not provide a detailed list. However, he merely mentioned that these guidelines typically depend on the quality level, ranging from light post-editing (minimal changes just to understand) to full post-editing (to make the output equivalent to human translation). His steps include: automatic translation, identification of unknown and mistranslated words, dictionary build-up, and post-editing to get the final corrected text. Yet, he highlights the importance of integrating post-editing into the software interface, but doesn't focus on formalized editing strategies, the types of errors, or the text types.

In this context, the ISO 18587:2017 Machine Translation (MT) Post-Editing Quality Standards (<https://iso18587.com/fr/#elementor-tab-title-6671>) outlines expectations to ensure both linguistic and contextual accuracy by addressing several key aspects. These include:

- Preserving the content of the source text (without omissions or additions).
- correcting linguistic errors, including spelling, punctuation, and formatting conventions.
- Adjusting sentence structure (for clarity and coherence).
- Paying attention to grammar, syntax, and semantics in the post-edited text.
- Ensuring specific terminology (according to client or speciality).
- Connecting the style to the text type.
- Following any client- or project-specific instructions.

2. Methodology

To achieve the aim of the study and to answer the research questions, a corpus-based study approach has been used. The corpus for this study consists of the *Etiquette of Visiting the Graveyard of the Martyrs of Uhud*, a religious tourism Arabic brochure published by the General Presidency for the Promotion of Virtue and the Prevention of Vice in Saudi Arabia, an institution responsible for disseminating religious guidance and public awareness materials.

The brochure includes general guidelines while visiting the *Graveyard of the Martyrs of Uhud*, where the battle of Uhud took place, viewed as religious and historical site. It includes: Description, Permissibility (and what the visitor should say), The Martyrs who are

buried there, and Actions that must be avoided. The brochure characterized by its culturally and religiously sensitive nature is an ideal source for examining how machine translation and post-editing address such material. The tool used in translation is ChatGPT. It is an AI language model developed by OpenAI, designed to understand and generate human-like text. It can perform various language tasks — including translating texts between languages. (<https://chatgpt.com/c/689aaf83-99a8-832d-b35b-db014d0d672a>). ChatGPT first provides the full English translation, keeping the original meaning and tone intact, then it offers the user the option to get a refined, academic-style version. The output text was suggested by this tool to be read like a formal guide rather than just a direct rendering. For this reason, it is the second style version offered by ChatGPT that was studied and post-edited (between June and July 2025).

Samples from a religious tourism brochure were collected, translated by AI, and then post-edited by the researcher. The target text was revised and reviewed with reference to the parallel English corpus when necessary to ensure both linguistic and cultural appropriateness. In this way, the capacities of AI and the tasks of the human translator have been highlighted. A full post-editing approach was employed, addressing both linguistic accuracy and cultural aspects. Although the corpus presents one single brochure, it is sufficiently rich of Islamic historical and religious values for the purposes of this study. It provides historical, religious, and cultural significance by referring to a major event in early Islamic history.

3. Results

The comparative study of the source text and the machine translated output, with reference to both the Arabic source text and the human-translated target text, revealed the following results organized according to the research questions.

3.1 Differences between MT output and final post-edited text

The analysis shows that cultural issues accounted for the largest share of interventions during post-editing while fewer linguistic patterns were involved. Cultural appropriateness, terminology choice, proper noun correction, and stylistic adjustments paved the way to full post-editing. It is worth noting that the output text was first analysed and corrected according to the source Arabic text before being post-edited. Table 1 presents samples from both the output and post-edited text, highlighting the changes made and their types. Thus, the differences between them are clearly illustrated.

Table 1: Differences between MT output and final post-edited text

Samples from raw MT output	Samples from post-edited text	Types of change
The Prophet	The Prophet (PBUH)	
Companions (without retention)	May Allah be pleased with him/them”	
Peace be upon you	As-salaamu alaykum	Cultural and religious appropriateness
If God wills	In sha Allah	
the Archers' Mountain	Mount of the Archers	

Samples from raw MT output	Samples from post-edited text	Types of change
Migration	Hijrah	Terminology refinement
Uhud incident	Battle of Uhud	
To greet them	To greet them with salaam	
Authentic reports indicate that	It is proven from the prophet that	
Tying cloths	Tying pieces of cloth	
without being washed or prayed over.	He neither performed the funeral prayer over them nor washed them	
Year of Ashes	Year of the Ashes, the year of famine	
It is recommended for men to visit the cemetery of the martyrs of Uhud	It is permitted for men ...	
We descended from it	We descended into it	
his nephew	The son of his sister	
Ibn al-Najjar Al-Tabarī	Ibn an-Najjaar At-Tabari	Proper noun correction

The table lists seven (07) categories of change: Cultural and religious appropriateness, terminology refinement, historical clarity, lexical correction, grammatical correction, ambiguity clarification, and proper noun correction. The post-edited text is different from the raw machine output mainly in cultural issues.

3.2 Post-editing strategies for cultural/religious appropriateness

The comparative analysis between raw MT output and post-edited text revealed a range of strategies applied by human post-editors to address cultural issues. Table 1 presents each strategy, its function, and an example from the corpus.

Table 2: Translation Strategies of Cultural and Religious Elements

Samples of cultural/religious elements (Arabic)	Translation in post-editing intervention	Strategy used	Notes
سنة ثلاثة	3 AH (625 CE)	Literal + Calendar Conversion	Converted to both Hijri and Gregorian dates for accessibility.
عام الرماد	Year of the Ashes, the year of famine	Literal + Explanatory Note	Literal translation with clarifying meaning.
النبي	Prophet Muhammad (PBUH)	Literal translation of Honorific Retention)+	Salutation, literally translated, preserving

Samples of cultural/religious elements (Arabic)	Translation in post-editing intervention	Strategy used	Notes
		precision	intended religious respect + precision adding the name of the Prophet.
رضي الله عنه	may Allah be pleased with him	Literal translation (of Cultural Retention)	Literally translated, preserving intended religious respect.
السلام عليكم	<i>as-salāmu 'alaykum</i>	Transliteration	transliteration of religious value
إن شاء الله	<i>Insha' Allah</i>	Transliteration	Transliteration of a phrase familiar among Muslim readers.

Table 2 reveals a clear preference for literal rendering combined with explanatory additions for historical terms (e.g., *عام الرمادة - سنة ثلاثة* (عـام الرـمـادـة - سـنة ثـلـاثـة), while keeping the religious context intact. Honorific retention and cultural retention were literally translated to refer to the Prophet and his Companions. The transliteration strategy in phrases such as (السلام عليكم) in greeting the graves and (إن شاء الله) was adopted to maintain authenticity for Muslim readers.

3.3 Translator's role in post-editing

During the post-editing process, the translator's role is not limited to correcting linguistic errors; cultural issues are to be addressed too. Table 3 presents the roles played in post-editing, related to the tasks undertaken.

Table 3: Examples of translator interventions during post-editing

Task	Translator's Role in Post-Editing
Cultural appropriateness	Ensure target text respects cultural norms and religious sensitivities
Terminology management	Select precise, field-specific terms
Clarification of ambiguity	Modify MT output by adding explanatory notes
Error correction	Correct lexical, grammatical, syntactic, and spelling mistakes
Adaptation to audience needs	Adjust message to ensure accessibility
Technology integration	Use MT output assisted by human judgment and decisions
Balance between Time management and quality assurance	Ensuring quality within deadlines

These results indicate that the translator's role in post-editing is to ensure both linguistic accuracy and cultural appropriateness, with frequent cultural interventions dominating the process.

4 Discussion

Differences between post-edited text and raw MT in linguistic and cultural terms with Cultural/Religious Appropriateness-Oriented Strategies

To answer this question related to output quality and cultural appropriateness, the corpus analysis revealed that MT generally rendered the meaning of the content but struggled with religious and cultural elements. The raw machine output required fewer linguistic corrections, yet it addressed semantic precision and cultural appropriateness issues. Similarly, Chen (2024) observed that AI tools produce texts with fewer errors but still struggle with cultural relevance, where human intervention is needed. These findings also fit with the ISO standard to ensure not only correcting linguistic errors but also preserving stylistic and cultural aspects of the source content according to the text type. According to Skopos theory, the translator's role is to apply strategies that fulfil the purpose of the translation. Similarly, In AI-assisted contexts, the post-editor has to take decisions to achieve the same purpose. In this context, full post-editing is needed.

To illustrate these interventions, table 2 in the Results section summarises the cultural/religious appropriateness-oriented strategies used in the corpus.

According to the table, post-editing requires strategies -such as honorific retention, literal and calendar conversion, and transliteration- to preserve cultural meaning and religious integrity. Literal translation, in some cases, was supplemented with explanatory notes or transliteration to retain religious integrity while ensuring accessibility. This confirms that post-editing in such contexts involves more than error correction. As established earlier, religious texts require careful cultural mediation; this was consistently evident in the corpus analysis.

The role of the translator in post-editing culturally sensitive texts

The study demonstrates that despite the changing role of the translator in the age of AI, traditional theoretical principles still serve as guidelines in culturally sensitive contexts such as religious tourism brochures. This observation aligns with Nida's (1969) concept of dynamic equivalence which seek to produce the same effect and Newmark's (1988) emphasis on determining the intention of the text to use the most appropriate methods in translation, giving more importance to revision of the target text. In traditional human translation, the revision step is relatively parallel to the post-editing process. It involves both linguistic correction and cultural adaptation. However, AI and machine translation are changing translators' roles from creators of the target text to post-editors of pre-translated material as stated by Chen (2024), Allen (2001) and Çetiner (2023); thus, requiring new technical skills. This fits Lukasik positive view considering this shift as an opportunity for more creative work.

New tasks and challenges in AI-mediated workflows compared to traditional translation views

The study results confirm that the use of AI influence the nature of the translator's job, moving from producer to corrector and controller of machine generated output as outlined in the literature (Chen 2024; Allen, 2001). However, despite this shift, linguistic accuracy and cultural appropriateness in traditional insights still remain present in his work. In fact, The translator/ post-editor acts as cultural mediator shaping texts to suit the target

audience's culture and communicative purpose, as viewed by Nida, Newmark, and Vermeer.

Moreover, the tasks undertaken in post-editing process in this study align within Chen's (2024) list including the new tasks to be undertaken by the translator: post-editing, quality assurance, and data management. In addition, the modifications observed in post-editing fit Allen's (2001) description of post-editing regarding modifying and correcting the output. Nevertheless, in this brochure context, translators are also responsible for safeguarding religious integrity. While some scholars (Alvarez-Vidal et al., 2020) view this shift negatively due to its impact on the profession, these findings suggest that in such text types, post-editing offers an opportunity for creativity. This, in turn, supports Lukasik's (2024) position towards automation encouraging more creative roles. Therefore, these findings confirm the changing role of the translator, keeping traditional concerns, and undertaking new tasks where creativity still be present along with new capacities. As a result, the multifaceted role of translators has expanded: they act as editors, correctors, controllers, and cultural mediators. Thus, a broader professional evolution is taking place in the age of AI.

However, as the corpus is limited to a religious tourism brochure and only one AI tool was used, the findings cannot be generalized beyond this specific context to effectively assess the role of translators in the age of AI. Moreover, the findings reflect a particular moment in time, as the corpus was studied using a tool that is continuously evolving. Another factor limiting the study is that the source and target audiences share the same religion (Muslim) but differ in language; in this case, the text is designed for Muslim visitors to the graveyard site, so the findings cannot be expanded to other cultural settings. A further limitation lies in the fact that the post-editing process was conducted by the researcher, which may be seen as affecting the objectivity of the analysis. Future research should therefore examine a variety of samples and compare different AI translation tools to better assess the role of translators in this context.

Conclusion

This study examined the translator's role in the age of AI by focusing on post-editing a religious tourism brochure pre-translated by ChatGPT, with particular attention to linguistic accuracy and cultural appropriateness. Specifically, the corpus analysis revealed new tasks and challenges, and human intervention was essential, particularly for cultural elements. At the same time, classical views on translation remain relevant in editing the target text. In this context, the findings support previous research described earlier since they highlight the limitations of machine translation, post-editing guidelines, and the evolving tasks and challenges faced by translators. Furthermore, they demonstrate that AI-mediated translation does not eliminate the translator's role; rather, it reshapes his tasks and provides opportunities for creativity. Ultimately, the study reveals that the human intervention is necessary in such domains where cultural sensitivity and religious integrity remain the most important part in post-editing.

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