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Artificial Intelligence and Language Mediation in Official Translation Offices in Algeria: Issues, Practices and Limits

الذكاء الاصطناعي والوساطة اللغوية في مكاتب الترجمة الرسمية في الجزائر: التحديات والممارسات والحدود

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Abstract:

This study analyses the impact of artificial intelligence (AI) on language mediation within official translation offices in Algeria. Drawing on a corpus of twenty authentic documents processed with neural and generative translation tools, as well as semi-structured interviews conducted with five sworn translators, the research explores how automation reshapes workflows, task allocation and professional responsibility. The findings show that AI enables significant gains in processing speed and textual fluency, particularly for repetitive and highly standardized segments, but remains insufficient, on its own, to ensure the legal accuracy, terminological conformity and cultural adaptation required in sworn translation. The study therefore argues for a hybrid mediation model in which AI acts as an instrumental mediator in support of an "augmented" human mediation, grounded in expert post-editing, ethical vigilance and data sovereignty.

Keywords: Artificial intelligence (AI); Language mediation; Official translation; Algeria; Legal liability.

الملخص:

تتناول هذه الدراسة أثر الذكاء الاصطناعي على الوساطة اللغوية داخل مكاتب الترجمة الرسمية في الجزائر. بالاعتماد على عيّنة مكونة من عشرين وثيقة رسمية مترجمة باستخدام أدوات الترجمة العصبية والذكاء الاصطناعي التوليدي، إضافة إلى مقابلات شبه موجهة مع خمسة مترجمين محلّفين، تحلّل الدراسة كيفية إعادة تشكيل الأتمتة لتدفّقات العمل، وتقاسم المهام، وحدود المسؤولية المهنية. وتبيّن النتائج أن الذكاء الاصطناعي يوفّر مكاسب معتبرة من حيث سرعة الإنجاز وسلاسة الصياغة، لاسيما في المقاطع المتكرّرة والموحّدة الصياغة، غير أنه يظلّ قاصرا، بمفرده، عن ضمان

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الدقة القانونية، والاتساق المصطلحي، والملاءمة الثقافية المطلوبة في الترجمة الرسمية. وتخلص الدراسة إلى ضرورة تبنّي نموذج وساطة هجيني، يعمل فيه الذكاء الاصطناعي كوسيط آلي مُسخّر لخدمة وساطة بشرية «معزَّزة»، تقوم على المراجعة اللاحقة المتخصّصة، واليقظة الأخلاقية، وحماية سيادة البيانات.

الكلمات المفتاحية: الذكاء الاصطناعي؛ الوساطة اللغوية؛ الترجمة الرسمية؛ الجزائر؛ المسؤولية القانونية.

Introduction

The recent rise of artificial intelligence (AI) is profoundly transforming translation practices worldwide, particularly through the widespread use of neural machine translation systems and generative language models (Läubli & Orrego-Carmona, 2023; O'Brien, 2022). In language professions, this shift manifests itself in a reconfiguration of workflows: the translator is no longer only the direct producer of the target text but increasingly acts as a supervisor and post-editor of machine-generated content (Hurtado Albir, 2020; O'Brien, 2022). In Algeria, this dynamic is part of a broader movement towards the digitalization of public administration and the justice system, which encourages the use of digital tools to speed up case processing and facilitate the multilingual circulation of official documents (Boulkroun, 2023).

Within this context, official translation offices occupy a distinctive position. Sworn translators are entrusted with a public service mission: accredited by the Ministry of Justice, they produce certified translations which are deemed authentic until proven otherwise and determine the validity of many administrative, civil, commercial and judicial acts (Benali, 2023). Official translation therefore cannot be reduced to a purely linguistic service; it constitutes a legal act engaging the translator's personal liability, since their seal and signature confer probative value on the translated text within the national legal order. In this framework, any change in practice, particularly through the introduction of AI-based tools, raises issues that go beyond technical efficiency and touch on the very foundations of public trust (Prieto Ramos, 2021).

The introduction of neural machine translation tools (such as DeepL) and generative language models (such as Gemini or ChatGPT) into Algerian official translation offices falls within a logic of "instrumental mediation", in which the machine intervenes upstream or during the process to propose textual equivalents, stabilize terminology and increase processing speed. These tools are particularly used for documents with highly recurrent structures, such as civil status records, certificates or certain diplomas, but they can also be mobilized for more complex texts (judgments, contracts, technical reports) (Prieto Ramos, 2021). However, although these technologies promise substantial productivity gains, they lack legal personality and cannot assume responsibility for the act or the fine-grained cultural and interpretive mediation that legal translation requires (Prieto Ramos, 2021; Šarčević, 2000).

Recent work on AI and translation in Algeria has focused mainly on the university context, examining student uses, didactic issues and the effects of post-editing on learning (Aïssaoui, 2024; Boukricha, 2024; Kheladi, 2024). Other studies, centered on specialized and legal translation, highlight the complementarity between human translation and AI tools, while insisting on the limits of the latter in terms of confidentiality, reliability and responsibility (Aïssaoui, 2024; Prieto Ramos, 2021; Šarčević, 2000). By

contrast, the specific field of official translation offices—at the crossroads of legal, administrative and sociolinguistic dimensions—remains largely unexplored, even though these structures are directly confronted with strong demand, the complexity of Arabic–French–English trilateralism and the requirements of public trust (Benali, 2023).

In this context, the question is not whether AI will replace sworn translators, but rather how it is concretely integrated into their language-mediation practices and how it reshapes the relationship between speed, quality and responsibility. This study therefore seeks to investigate the "grey zone" of human–machine collaboration in official translation: AI appears here both as a driver of modernization and as a potential source of risk (invisible errors, excessive standardization, breaches of confidentiality) (Aïssaoui, 2024; Kheladi, 2024). The aim is thus to move beyond the binary opposition between outright rejection and unconditional acceptance and to analyze real uses, professional representations and ethical trade-offs made by sworn translators.

Drawing on a corpus of authentic documents translated with the support of AI tools and on semi-structured interviews conducted with official translators, this research addresses the following questions:

- How do official translation offices in Algeria integrate AI into their day-to-day language-mediation practices?
- What benefits and limitations do sworn translators identify in the use of these tools in legal and administrative contexts?
- To what extent does AI reshape the relationship between processing speed, linguistic quality and legal security in official translation?

The article is structured as follows. After presenting the theoretical and conceptual framework, which articulates language mediation, legal translation and AI ethics, we set out the study's methodology, before presenting and analyzing the main findings. A final discussion relates these results to existing work and proposes recommendations for an "augmented" form of language mediation in Algerian official translation offices.

1. Theoretical and Conceptual Framework

1.1. Official translation in the age of AI: the need for regulated modernization

The integration of artificial intelligence into translation practices is part of a broader digital transformation of public services and language professions (Boulkroun, 2023; O'Brien, 2022). Translation is no longer conceived solely as a craft-based operation but as a process that can be optimized through neural machine translation technologies and large language models (Läubli & Orrego-Carmona, 2023; Castilho et al., 2018). In this context, several authors speak of "translation in the age of AI", characterized by the widespread use of post-editing and by a reconfiguration of the translator's role as a supervisor of algorithmic output, particularly for specialized and legal texts (Hurtado Albir, 2020; Moorkens, 2022; Pym & Torres-Simón, 2022).

In Algeria, this dynamic converges with policies aimed at modernizing public administration and digitalizing the justice system (Boulkroun, 2023). Official translation offices, which handle a substantial share of the documentary flows associated with administrative, civil and commercial procedures, find themselves at the heart of this modernization imperative. The issue, however, is not to replace sworn translators with AI, but to examine how these tools can be integrated into a regulatory framework in which accuracy, traceability and legal responsibility are core requirements (Benali, 2023; Prieto Ramos, 2021; Šarčević, 2000).

1.2. Institutional language mediation and "instrumental mediation"

Language mediation in institutional settings refers to the range of operations through which the translator ensures the transfer of meaning from one legal, cultural and linguistic order to another, taking into account target audiences, norms and power relations (Hurtado Albir, 2020; Munday, 2016). In official translation offices, this mediation has historically relied on the figure of the sworn translator, who combines two forms of expertise: linguistic (command of several working languages) and legal (understanding the effects of terms and formulae within the national normative order).

The introduction of AI leads to a redefinition of this mediation in the form of "instrumental mediation". By this expression, we refer to a configuration in which the algorithmic tool intervenes as a co-actor in the production chain, generating translation proposals, stabilizing recurrent segments and facilitating the handling of large volumes of text (Läubli & Orrego-Carmona, 2023). Mediation does not disappear; it is partly displaced towards the human–machine interface. The translator then becomes the critical control point who validates, corrects, contextualizes and, where appropriate, rejects the machine's suggestions. In this configuration, post-editing assumes a central role, not only as a technical activity but as a key site of cognitive and cultural mediation (Aïssaoui, 2024; O'Brien, 2022; Prieto Ramos, 2021).

1.3. Responsibility, public trust and the ethics of the sworn translator

What distinguishes official translation is that it produces concrete legal effects. The sworn translator's signature and seal confer probative value on the translation and engage their personal liability. The translation is not merely a textual product but a performative speech act that may condition access to rights, procedures or resources (Prieto Ramos, 2021). In legal terms, AI—regardless of its sophistication—possesses neither legal personality nor the capacity to bear responsibility. It cannot therefore "attest": it only produces probabilistic outputs that must be endorsed or corrected by a human agent (Aïssaoui, 2024; Prieto Ramos, 2021).

This ontological gap between the technical power of AI and its lack of legal status places the translator at the center of an ethical dilemma. Intensive reliance on algorithmic tools may foster a relaxation of professional vigilance, sometimes described as "automation bias" or "automation of trust", whereby the fluency of the generated text masks the possibility of serious errors (Moorkens, 2022; Pym, 2014). For official translators, the question then becomes: how far can linguistic production be delegated to a machine without undermining public trust in the act of translation and the legal security of citizens? The answer points to the need to codify the conditions under which AI may be used (confidentiality, systematic verification, traceability of post-editing) within professional and ethical guidelines adapted to regulated professions (Prieto Ramos, 2021; Aïssaoui, 2024).

1.4. Linguistic trilateralism and sociolinguistic constraints

The Algerian context is characterized by a particularly entrenched form of linguistic trilateralism in institutional practices: Arabic occupies a central place as the language of the law and of civil status records, French continues to dominate many technical, administrative and economic domains, while English is gradually establishing itself as a language of business, research and international exchanges (Benali, 2023). To these three poles must be added the presence of Amazigh and the diversity of Arabic dialectal varieties, which appear in certain documents or supporting materials (Kheladi, 2024).

This configuration complicates the work of AI. The models in use are generally trained on corpora dominated by standardized varieties of major international languages, which limits their ability to handle local sociolinguistic specificities (Läubli & Orrego-Carmona, 2023). The translation of legal concepts rooted in family law or social practices specific to the Algerian context, as well as of toponyms or nationally situated administrative realities, quickly exposes the limitations of general-purpose systems (Aïssaoui, 2024; Šarčević, 2000). Projects to develop AI solutions trained on Algerian data—including national dialects—offer a potential response to these challenges but do not remove the need for human mediation capable of arbitrating between standardization and respect for local nuances (Boukricha, 2024; Kheladi, 2024).

Within this framework, the sworn translator appears as a sociolinguistic regulator: they ensure that passage through the algorithm does not erase distinctions that are meaningful for citizens or users, and that the chosen terminology remains faithful both to legal texts and to the country's cultural realities (Benali, 2023; Prieto Ramos, 2021).

2. Research Problem and Objectives

The introduction of artificial intelligence into official translation offices in Algeria is not merely a technical upgrade of available tools. It entails a deeper transformation of language mediation, redistributing roles between humans and machines within a space that is heavily regulated by law and by public trust (Benali, 2023; Prieto Ramos, 2021; Šarčević, 2000). The coexistence of the processing speed offered by neural or generative translation systems and the requirement for absolute precision that characterizes sworn translation gives rise to a central paradox: how can the near-instantaneity of algorithmic output be reconciled with the potential nullity of an act in the event of an error—even a minor one—in the legal or administrative rendering of the text? (Aïssaoui, 2024; Moorkens, 2022; O'Brien, 2022).

This paradox is heightened by Algeria's specific linguistic configuration. Arabic–French–English trilateralism, combined with the diversity of registers and varieties, requires official translators to navigate between multiple normative and cultural systems (Benali, 2023). AI can act as a powerful facilitator, offering rapid correspondences in the three languages and handling recurrent segments, but it can just as easily function as a distorting filter when models apply legal or cultural categories that are foreign to the Algerian reality (Aïssaoui, 2024; Castilho et al., 2018). The question thus becomes whether AI operates as a bridge or as a source of noise in the transfer of meaning between these different linguistic spheres (Läubli & Orrego-Carmona, 2023; Pym & Torres-Simón, 2022).

Against this backdrop, the present research is guided by the general problem of analyzing how AI reshapes language mediation within official translation offices in Algeria. More specifically, it seeks to

understand how sworn translators, in their everyday practice, articulate the operational advantages of automation (speed, fluency, management of large textual volumes) with the requirements of semantic fidelity, terminological conformity and legal responsibility that underpin their professional status (Benali, 2023; Hurtado Albir, 2020; Prieto Ramos, 2021). The study thus aims to shed light on the "grey zone" of human–machine collaboration, situated between performance gains and the risks of excessive standardization, invisible errors or algorithmic dependence (Aïssaoui, 2024; Moorkens, 2022; Pym, 2014).

On the basis of this problem statement, four main objectives are formulated:

- To analyze the role of AI as an instrumental mediator in meaning transfer in official translation, by identifying the types of tasks and textual segments for which it is used and considered effective by translators (Läubli & Orrego-Carmona, 2023; O'Brien, 2022).
- To model hybrid workflows combining machine translation systems and human post-editing, in order to describe the actual distribution of tasks between the machine (pre-translation, formal regularization) and the sworn expert (control, adjustment, validation) (Castilho et al., 2018; Pym & Torres-Simón, 2022).
- To assess the performance of AI through the lens of the "speed–fluency–fidelity" triad, by highlighting its limitations when faced with specific legal notions, local sociocultural realities or institutional formatting constraints (Aïssaoui, 2024; Prieto Ramos, 2021; Šarčević, 2000).
- To examine the ethical and security issues associated with the use of AI in official translation offices, particularly in terms of data confidentiality, liability in case of error and dependence on external platforms and models (Boulkroun, 2023; Moorkens, 2022; Prieto Ramos, 2021).

These objectives structure the empirical approach presented in the following section, which combines corpus analysis and fieldwork in order to account for actual language-mediation practices in the age of AI within Algerian official translation offices.

3. Research Methodology: A Mixed Empirical Design

3.1. Study type and overall approach

This research adopts a combined qualitative and quantitative approach, aiming to capture both the textual effects of AI use in official translation and the professional representations of sworn translators (Creswell & Plano Clark, 2018). It relies on two complementary components:

- A corpus analysis, based on a systematic comparison between translations produced with AI tools and versions post-edited by official translators.
- A field survey, conducted with sworn translators, in order to capture their reported practices, perceptions and ethical trade-offs in the face of automation.

This twofold design makes it possible to confront observable AI performance with the semiprofessional reality of official translation offices and to triangulate textual data with professional discourse, thereby strengthening the validity of the findings (Creswell & Plano Clark, 2018).

3.2. Study corpus

The corpus consists of twenty (20) authentic documents processed within official translation offices in Algeria. All documents were fully anonymized (proper names, file numbers, case references, sensitive toponyms) in order to guarantee the confidentiality of personal and institutional data, in line with ethical requirements in language-science research (Benali, 2023; Prieto Ramos, 2021).

Two main language combinations were selected, based on their frequency in practice:

- Arabic → French: predominant for civil status records, judicial documents and part of the administrative documentation.
- French → English: frequent in files with commercial, academic or international mobility dimensions (Benali, 2023).

To reflect the diversity of tasks in official translation, the corpus was structured into two broad textual categories, drawing on the distinctions commonly made in legal translation studies between formulaic and discursive segments (Šarčević, 2000; Prieto Ramos, 2021):

- Repetitive and fixed segments: documents with highly standardized, form-based structures (birth certificates, certificates, diplomas, standard attestations).
- Compositional and complex segments: texts with high discursive density and strong interpretive stakes (judgments, court rulings, expert reports, partnership contracts).

This distinction enables a fine-grained observation of differences in AI behavior depending on whether segments fall under a logic of routine or of legal and cultural interpretation (Castilho et al., 2018).

3.3. Post-editing protocol: phases A, B and C

The assessment of AI's contribution to language mediation was based on a three-phase protocol applied to all selected segments, in line with studies on post-editing in machine translation (Castilho et al., 2018; Pym & Torres-Simón, 2022).

Phase A – Raw AI translation

Source segments were first submitted to two AI engines: a neural machine translation tool (such as DeepL) and a generative language model (such as Gemini). Queries were formulated in a standardized way, without complex prompting, in order to simulate typical professional use. The output of this phase corresponds to raw machine translations, without human intervention.

Phase B – Human post-editing

The same segments were then subjected to exhaustive revision by a sworn translator, responsible for verifying legal and terminological conformity, correcting meaning errors, reformulating ambiguous passages and adjusting formatting to institutional requirements. This step constitutes post-editing, understood as the locus of human reappropriation of the generated text and reaffirmation of professional responsibility.

Phase C – Gap analysis

Finally, a detailed comparison was conducted between the raw versions (Phase A) and the post-edited versions (Phase B). Differences were classified into several categories: mistranslations, omissions, additions, terminological errors, stylistic improprieties, formatting issues, hallucinations (provision of information not present in the source text), in line with error typologies commonly used in MT evaluation (Castilho et al., 2018; Pym & Torres-Simón, 2022). This analysis made it possible to identify zones in which AI can be considered relatively reliable and segments that systematically require expert intervention.

Based on this procedure, an estimate of the "automatable share" of the work was derived: overall, AI proved satisfactory for a majority of repetitive, template-based segments, whereas passages with a strong legal or cultural load required thorough rereading or even complete rewriting. This tendency is discussed in more detail in the results section.

3.4. Mediation assessment criteria

Four main criteria were used to evaluate AI's performance as an instrumental mediator, drawing on work in legal translation and translation-quality assessment (Prieto Ramos, 2021; Šarčević, 2000):

- **Terminological accuracy**

  Adequacy of the terms used with the legal and administrative lexicon in force in Algeria, particularly for notions drawn from civil law, family law and business law (Benali, 2023; Prieto Ramos, 2021).

- **Syntactic and formal conformity**

  Compliance with the phraseology specific to official documents (recurrent formulae, administrative or judicial style) and with formal constraints (structure of acts, mandatory mentions, institutional typography).

- **Semantic fidelity**

  Ability to convey the intention of the source text without distortion, avoiding shifts in meaning, excessive simplifications or the importation of foreign legal concepts (Šarčević, 2000; Pym, 2014).

- **Cultural and sociolinguistic adaptation**

  Ability to handle cultural references, local realities and notions that cannot be translated literally (for example certain terms relating to personal status or specific social practices), in a way that is consistent with the Algerian linguistic landscape (Aïssaoui, 2024; Kheladi, 2024).

Each segment was evaluated against these criteria, which made it possible to distinguish zones of robustness and zones of limitation in AI performance in the context of official translation, from both a textual-quality and a legal-security perspective.

3.5. Field survey: interviews with official translators

To confront the corpus-analysis results with professionals' reported perceptions and practices, semi-structured interviews were conducted with five (05) sworn translators working in official translation offices located in different wilayas. The use of semi-structured interviews makes it possible to allow actors'

own categories of meaning to emerge while ensuring a minimum level of comparability between accounts (Kaufmann, 2011).

Participants, whose profiles varied in terms of seniority, working languages and specialization, were selected on the basis of their proven experience with AI tools in their daily practice. The interview guide focused mainly on:

- The types of tools used (machine translation, generative models, hybrid software) and the tasks for which they are mobilized.
- The perceived benefits in terms of speed, working comfort and linguistic quality.
- The identified risks in terms of errors, loss of nuance, data confidentiality and dependence on algorithms.
- The impact of AI on their professional identity, their understanding of language mediation and their relationship to legal responsibility.

The interviews were recorded with informed consent, transcribed, and subjected to thematic analysis in order to identify regularities and divergences in translators' discourse and to relate these data to the trends observed in the corpus.

4. Results: AI Performance and Mediation in Practice

4.1. Optimizing operational performance

Corpus analysis first reveals a significant transformation in the operational dimension of work within official translation offices. Based on the twenty documents studied, the translators interviewed estimate that the use of AI reduces initial drafting time by around 50%, a gain that can reach 70% for documents with highly recurrent structures (birth certificates, certificates, diplomas), which is consistent with findings from other professional post-editing contexts. This reduction in production time mainly concerns the generation of the "first draft", which the machine produces in a few seconds from highly standardized segments.

This time gain is accompanied by a perceived "textual smoothing". Compared with earlier forms of computer-assisted translation (segment-based translation memories), output produced by neural and generative systems displays syntactic and stylistic coherence that is generally deemed satisfactory for simple administrative texts, as also reported in work on perceived quality in neural MT (Castilho et al., 2018). This facilitates users' reading and appropriation of documents, while reducing the cognitive fatigue associated with repeatedly typing identical structures. Translators report that they can thus devote a larger share of their attention to checking critical elements (dates, amounts, article numbers, toponyms, proper names) rather than drafting every sentence from scratch, which echoes the idea of a shift in focus towards control and validation tasks (O'Brien, 2022; Pym & Torres-Simón, 2022).

4.2. Case studies: three typical situations of AI-assisted mediation

A fine-grained analysis of segments drawn from three types of documents nuances these findings by highlighting the limits of instrumental mediation.

4.2.1. Company articles: formalism and enforceability

In the French–English translation of the articles of association of a limited liability company, the clause « Le gérant a les pouvoirs les plus étendus pour agir en toute circonstance au nom de la société » is central. AI tools typically propose: "The manager has the broadest powers to act in all circumstances on behalf of the company." While the translation preserves the general meaning, it often fails to capture nuances of company law. The sworn translator must ensure that the term « gérant » is rendered as "Managing Director" or "Manager" depending on the target jurisdiction, and that « pouvoirs les plus étendus » corresponds to "plenary powers" or "unrestricted authority" in relevant common-law or business-law references.

Here, mediation involves a comparative-law adjustment: the AI translates the text, but the translator translates the system. This intervention helps ensure that the document will be accepted by banks or international chambers of commerce without ambiguity concerning the manager's powers and liability (Pym & Torres-Simón, 2022; Benali, 2023).

4.2.2. Administrative litigation: procedural terminology and nuances of the law

In administrative appeals, the Arabic source segment « تجاوز السلطة وعيب الشكل » is a standard formula in litigation. Machine translation systems (DeepL/Gemini) often render this as "abuse of power and defect in form." However, in Algerian administrative law, the established expressions are « excès de pouvoir » and « vice de forme ». By opting for "abuse of power" and "defect in form", AI weakens the legal force of the grounds raised by counsel.

Human mediation here takes the form of procedural precision. The sworn translator must correct the terminological "coldness" of the machine in order to reintroduce the exact technical terms used by administrative courts. The stakes are high: approximate terminology could hinder the understanding of the case by a foreign court or institutional partner (Prieto Ramos, 2021; Šarčević, 2000).

4.2.3. Commercial register: standardized terminology and modernization

A third example comes from an extract from the commercial register in which the designation «Société à responsabilité limitée (SARL) » appears in a French–English translation. For this type of segment, both families of tools tested provide very stable and technically correct equivalents. The difficulty does not lie in the standard legal form ("limited liability company"), which is widely acknowledged in the literature on business-law translation (Šarčević, 2000), but in the corporate purpose, where some models suggest categories drawn from other economic systems or sectoral vocabularies that are misaligned with the nomenclatures used by the Algerian National Centre of Commercial Register.

In this context, AI proves a reliable partner for handling standardized terminology and recurrent structures, while the translator retains responsibility for checking the compatibility of proposed terms with Algerian institutional reference frameworks (Benali, 2023). Mediation thus occurs in the "last mile": the machine speeds up the journey, but the expert remains the guarantor of the final adjustment.

4.2.4. Administrative decision and terminology for remedies

Another example concerns an administrative decision including the phrase « هذا القرار قابل للطعن أمام المحكمة الإدارية خلال أجل شهرين (02) من تاريخ التبليغ ». Machine translation systems most often produce a structure such as "This decision may be appealed before the administrative court within two (02) months from the date of notification." Although the translation appears correct linguistically, some generative models simplify or alter the terminology for remedies, for instance by using "appeal" instead of the more general "recours", or by omitting the explicit indication of when the time limit starts to run ("from the date of notification").

Here, human mediation plays a decisive role in preserving the rigor of wording in administrative litigation. The translator must maintain the distinction between the various remedies provided for under Algerian law and keep the explicit reference to the time limit and its starting point, both of which may condition the admissibility of any future challenge. AI delivers an efficient draft, but even small changes to these terms can have significant practical consequences for the litigant, which justifies careful expert control.

4.3. Summary of performance: towards an empirical "70/30 rule"

Systematic comparison between raw AI versions (Phase A) and post-edited versions (Phase B), together with feedback from the translators interviewed, reveals an empirical trend that can be summarized as a "70/30 rule". Roughly speaking, AI tools prove reliable for a large proportion of repetitive segments with low interpretive stakes (around 70% of the textual volume studied), for which post-editing involves only minor interventions (stylistic adjustments, micro-terminological corrections). This finding is consistent with studies showing that neural MT is particularly effective on recurrent, low-polysemy segments (Castilho et al., 2018; Läubli & Orrego-Carmona, 2023).

Conversely, about 30% of segments—those with high legal, cultural or sociolinguistic density—require extensive intervention or even substantial rewriting. It is in this zone that mistranslations, terminological errors, approximations in the hierarchy of norms, cultural missteps and divergences from established institutional formulae tend to concentrate (Prieto Ramos, 2021; Šarčević, 2000). This supports the view that AI is an effective mediator for the "heavy lifting" of text production, but that it cannot replace the fine-grained mediation work required in sworn translation, which remains the locus of the translator's legal and ethical responsibility (Aïssaoui, 2024; Pym & Torres-Simón, 2022).

5. Analysis of Results: Speed, Conformity and Responsibility

5.1. Speed and fluency: real gains under strict supervision

The data collected confirm that AI acts as a significant driver of modernization in terms of processing times and working comfort. Shortened drafting times and the syntactic fluency of generated texts help meet the growing demand for official translations more rapidly, particularly in visa applications, court proceedings and commercial formalities. In a context where translation offices are regularly confronted with workload peaks, this optimization is perceived as a major asset.

However, these gains are contingent on the implementation of robust control mechanisms. The temptation to treat AI output as an almost final product, owing to its apparent stylistic quality, creates a risk of "fluency illusion": a linguistically polished text may conceal major legal errors or shifts in meaning that

are difficult to detect through superficial rereading alone (Aïssaoui, 2024; Moorkens, 2022). The translators interviewed therefore insist on the need to maintain a systematic posture of vigilance, particularly for segments with high stakes.

5.2. Tripartite conformity: linguistic, legal and cultural

Evaluation of AI-assisted translations reveals a frequent dissociation between linguistic success and institutional conformity. On the strictly grammatical level, outputs are often judged satisfactory. By contrast, discrepancies emerge when texts are examined through the lens of the linguistic–legal–cultural triad (Prieto Ramos, 2021; Šarčević, 2000).

From a legal standpoint, terminological errors and conceptual approximations persist, particularly when AI resorts to categories drawn from other legal systems to render notions specific to Algerian law (Benali, 2023; Šarčević, 2000). From a cultural and sociolinguistic standpoint, models struggle to convey the nuances of certain concepts related to personal status, toponyms or local administrative realities—difficulties already identified in the literature on AI and linguistic diversity (Aïssaoui, 2024; UNESCO, 2025). In these areas, human mediation remains irreplaceable for ensuring alignment between the translated text and the normative and cultural environment within which it will be interpreted (Benali, 2023; Prieto Ramos, 2021).

5.3. Recentering human responsibility

The most striking result of the study lies in the recentering of responsibility on the sworn expert. AI operates as a powerful tool for pre-drafting and managing large textual volumes, but the legal quality and institutional validity of the final document rest entirely on the post-editing and validation work performed by the official translator. It is this intervention that transforms a probabilistic algorithmic product into a linguistic and legal act that can be relied upon.

The interviews show that translators increasingly position themselves as “auditors” of the machine: their role is to test, control, correct and, where necessary, reject AI suggestions (Pym & Torres-Simón, 2022). This posture requires enhanced skills in the critical reading of algorithmic output, in understanding risks related to data confidentiality and in redefining the scope of their responsibility in a digital environment (Aïssaoui, 2024; Moorkens, 2022). AI does not reduce human responsibility; it reshapes it by shifting it towards supervision and final decision-making (Prieto Ramos, 2021).

6. Discussion: Towards “Augmented” Mediation

The findings both confirm and qualify observations made in recent literature on the impact of AI on specialized and legal translation (Aïssaoui, 2024; Prieto Ramos, 2021). Several studies emphasize that neural MT and post-editing reposition the translator as a supervisor of an automated textual flow rather than as the sole author of the target text (Läubli & Orrego-Carmona, 2023; O’Brien, 2022). This trend is reflected in the context of Algerian official translation offices, where sworn translators describe their work as a succession of filtering, correction and validation operations applied to algorithmic proposals, particularly on standardized segments.

However, our study shows that this reconfiguration does not lead to a downgrading of the translator’s role, but to a redefinition of their expertise. Far from being reduced to a mere “post-editor”, the

sworn expert assumes the role of high-level mediator, responsible for ensuring the legal and cultural conformity of texts, identifying the "invisible errors" that the fluency of AI output tends to conceal, and ultimately deciding the form taken by the translated act (Benali, 2023; Pym, 2014). AI does not abolish language mediation; it shifts it to a more strategic level, where the key competence becomes the ability to audit and master the tool rather than passively endure it (Pym & Torres-Simón, 2022).

From a legal and ethical standpoint, the results converge with analyses that call for tighter regulation of AI in sensitive domains (Moorkens, 2022; Prieto Ramos, 2021). The use of solutions hosted outside national territory, the handling of personal or judicial data by third-party servers and the lack of transparency about model functioning all raise sovereignty and confidentiality issues that official translators cannot ignore (Boulkroun, 2023; Aïssaoui, 2024). Our study highlights a tension between the pursuit of performance and the obligation to protect public trust: the more performant and embedded AI becomes in everyday routines, the greater the risk of banalization and over-confidence, to the detriment of professional vigilance (Aïssaoui, 2024; O'Brien, 2022).

The Algerian sociolinguistic context adds a further layer of complexity. While AI performs well in handling Arabic–French–English trilateralism on standardized segments, it remains largely dependent on international corpora that reflect other legal systems and cultural practices (Kheladi, 2024; UNESCO, 2025). This helps explain the shifts observed in translating concepts related to family law or local administrative realities, as well as the tendency of some models to "normalize" texts into more globalized formulations (Aïssaoui, 2024). In this perspective, initiatives to develop models trained on Algerian legal and linguistic data appear promising, but they do not eliminate the need for human control rooted in the national context (Benali, 2023).

Lastly, the empirical "70/30 rule" identified by the analysis sheds light on the compromise that is emerging in practice. AI seems capable of handling a large part of routine work on repetitive segments with low interpretive stakes, thereby freeing up time for the 30% of sensitive segments where genuine language and legal mediation take place (Castilho et al., 2018; Läubli & Orrego-Carmona, 2023). This configuration supports a model of "augmented mediation": technology takes care of volume and routine, while the translator concentrates their expertise on meaning-critical nodes, zones of risk and legal effects (Prieto Ramos, 2021; Pym & Torres-Simón, 2022).

7. Conclusion

The study conducted in Algerian official translation offices highlights a turning point in how language mediation is practiced in the age of artificial intelligence. Far from being a merely ancillary tool, AI has become a structuring actor in the translation chain, able to generate linguistically fluent texts in a matter of seconds and to help absorb the growing demand for official translations. It thus contributes to the modernization of practices by reducing processing times and improving translators' working conditions (Benali, 2023).

However, the findings clearly show that this modernization cannot be conceived in terms of substitution. In the field of official translation, where each act engages the translator's personal responsibility and produces concrete legal effects, language mediation remains inseparable from ethical and legal mediation that AI cannot assume (Prieto Ramos, 2021; Šarčević, 2000). The limitations observed

in semantic fidelity on complex segments, the terminological approximations in Algerian law and the shortcomings in handling local sociolinguistic nuances confirm that human intervention is decisive for ensuring the safety of acts (Aïssaoui, 2024; Benali, 2023).

The future of official translation in Algeria therefore seems to be shaped by a model of augmented mediation rather than replacement. AI is called upon to play the role of an instrumental mediator, responsible for the "heavy lifting" of textual production, while the sworn translator retains responsibility for the "last word": it is they who verify, interpret, contextualize and authenticate the final text (Benali, 2023; Pym & Torres-Simón, 2022). This configuration nonetheless presupposes enhanced translator training, particularly in specialized post-editing, critical reading of algorithmic output and understanding of cybersecurity and data-sovereignty issues (Aïssaoui, 2024; Moorkens, 2022).

On the basis of these findings, several recommendations can be made:

- **Training**: integrate modules on critical use of AI in legal translation, post-editing of AI-generated texts and management of "invisible error" risks into university curricula and continuing professional development.
- **Ethical and regulatory frameworks**: develop, at the level of competent authorities, charters or guidelines governing the use of AI in regulated professions, specifying obligations regarding confidentiality, traceability and responsibility.
- **Technology and sovereignty**: encourage the development of language-AI solutions trained on Algerian legal and administrative corpora, including national varieties, in order to reduce dependence on external platforms and better account for the specificities of the local context.

Ultimately, the results of this research suggest that AI should not be viewed as a replacement for official translators, but as a demanding partner that compels a rethinking of the boundary between technique and responsibility. In the medium term, the quality and credibility of language mediation in Algeria's official translation offices will depend on the ability to articulate these two dimensions effectively.

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