

RECONFIGURING THE TRANSLATOR'S COMPETENCES IN THE AGE OF ARTIFICIAL INTELLIGENCE: BETWEEN COMPLEMENTARITY AND SUBSTITUTION

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The rapid advancement of artificial intelligence (AI) has fundamentally altered the landscape of professional translation. This article examines how translator competences are being redefined in an era where AI-powered tools are both collaborators and competitors. Focusing on both technical and literary translation, we integrate recent research to analyze the complementarity versus substitution dilemma. AI translation platforms such as DeepL, Google Translate, and large language models, such as ChatGPT, offer unprecedented speed and terminological accuracy, prompting a shift in translator workflows toward machine translation post-editing and technology integration. However, these same technologies raise questions about the future role of human translators, especially in tasks requiring creativity, cultural nuance, and ethical judgment. The article discusses practical implications for translator training, including updated competence frameworks emphasizing AI literacy and post-editing skills, ethical considerations, i.e., data privacy, authorship, and quality assurance, workflow transformations, and employment prospects. It is arguable that a hybrid model is emerging in which AI handles routine, repetitive tasks while human translators focus on interpretive, creative, and quality-critical aspects. Rather than a simple replacement of humans by machines, the translator's role is being reconfigured – requiring a balance between leveraging AI's strengths and preserving the uniquely human dimensions of translation.

Keywords: *translation competence, artificial intelligence, machine translation, post-editing, literary translation, ethics, integrity, confidentiality, professional practice*

RECONFIGURAREA COMPETENȚELOR TRADUCĂTORULUI ÎN ERA INTELIGENȚEI ARTIFICIALE : ÎNTRE COMPLEMENTARITATE ȘI ÎNLOCUIRE

Progresul rapid al inteligenței artificiale (IA) a modificat fundamental peisajul traducerii profesionale. Acest articol examinează modul în care competențele traducătorilor sunt redefinite într-o eră în care instrumentele bazate pe IA sunt atât colaboratori, cât și concurenți. Concentrându-ne atât pe traducerea tehnică, cât și pe cea literară, integrăm cercetări recente pentru a analiza dilema complementarității versus substituirii. Platformele de traducere bazate pe IA, precum DeepL, Google Translate și modelele lingvistice de mari dimensiuni, precum ChatGPT, oferă o viteză și o acuratețe terminologică fără precedent, determinând o schimbare în fluxurile de lucru ale traducătorilor către post-editarea traducerilor automate și integrarea tehnologiei. Cu toate acestea, aceste tehnologii ridică întrebări cu privire la rolul viitor al traducătorilor umani, în special în sarcinile care necesită creativitate, nuanțe culturale și judecată etică. Articolul discută implicațiile practice pentru formarea traducătorilor, inclusiv cadrele de competență actualizate care

pun accentul pe cunoștințele de AI și abilitățile de post-editare, considerente etice, adică confidențialitatea datelor, drepturile de autor și asigurarea calității, transformările fluxului de lucru și perspectivele de angajare. Se poate argumenta că apare un model hibrid în care AI se ocupă de sarcinile de rutină, repetitive, în timp ce traducătorii umani se concentrează pe aspectele interpretative, creative și critice pentru calitate. Rezultatul nu este o simplă înlocuire a oamenilor cu mașini, ci o reconfigurare a rolului traducătorului, care necesită un echilibru între valorificarea punctelor forte ale IA și păstrarea dimensiunilor unice ale traducerii umane.

Cuvinte cheie: *competență în traducere, inteligență artificială, traducere automată, post-editare, traducere literară, etică, integritate, confidențialitate, practică profesională*

Artificial intelligence is rapidly transforming the field of translation, challenging traditional notions of translator competence and the division of labour between humans and machines. On one hand, modern neural machine translation (NMT) systems like Google Translate and DeepL can instantly produce passable translations in dozens of languages, and generative AI models such as OpenAI's ChatGPT demonstrate astonishing fluency. These tools have improved translation speed and accessibility to an extent that was unimaginable a decade ago. For example, the adoption of Google's NMT in the 2010s led to measurable slowdowns in translator employment growth, suggesting some displacement of human labour by AI [1]. A recent study estimates that between 2010 and 2023, greater use of machine translation corresponded with a significantly lower increase in translator jobs, with around 28,000 positions not created that otherwise might have been. Such trends feed fears that AI is substituting human translators and even diminishing the need for foreign language skills altogether [1].

On the other hand, mounting evidence suggests AI cannot fully replicate human expertise, especially for nuanced tasks. AI translations often require human post-editing to meet professional standards [2], and in creative domains like literary translation, machines still fall far short of human artistry [3]. As a result, many scholars, and practitioners frame AI's role as complementary: an enhancement to translators' productivity and toolkit, rather than an outright replacement. The notion of a hybrid workflow is gaining traction, where AI handles the heavy lifting of initial translation drafts or routine texts, while human translators remain in charge of critical revision, cultural adaptation, and sensitive decision-making. This approach aligns with the view that the value-added by human translators lies in what machines currently cannot do – applying interpretive judgment, creativity, and deep contextual understanding [4].

The advent of AI in translation is compelling educators and professional bodies to reassess the competences that modern translators need. Traditional models of translator competence – encompassing linguistic proficiency, cultural knowledge, research skills, and technological know-how – are being updated to reflect the central role of AI and machine translation (MT) in the workplace. Multi-component competence frameworks used in translator training are increasingly incorporating MT literacy, post-editing skills, and the ability to critically interact with AI outputs as core sub-competences [5]. In other words, tomorrow's translators must not only master languages and subject domains, but also learn how to leverage AI tools effectively and responsibly.

For instance, the European Master's in Translation (EMT) competence framework was updated in 2022 to explicitly include machine translation and post-editing. Under the EMT's Technology competence, students are expected to “understand the basics of MT systems and their impact on the translation process, and integrate MT into a translation workflow where appropriate”, as well as post-edit MT output to professional quality standards. Post-editing – the human revision of machine-translated text – has thus shifted from an optional skill to a fundamental competence for new translators. The framework even specifies abilities like editing source text for MT processing (pre-editing) and using style guides and glossaries during post-editing [6]. These additions acknowledge that MT is now an integral part of professional translation competence.

Academic programs are following suit by embedding AI-related training into their curricula. Courses on computer-assisted translation (CAT) tools now routinely cover not just translation memory and terminology management, but also neural MT engines and even emerging tools like large language models. For example, Kent State University's M.A. in Translation program highlights that students learn about MT and post-editing alongside traditional translation techniques, and emphasizes that despite MT's improvements, post-editing remains “incredibly important and necessary for producing accurate, well-written translated text”. The program trains students in when and how to use MT output, and how to edit it by correcting grammar, ensuring no meaning is lost or added, and checking for cultural appropriateness [2]. Such training reflects a broader pedagogical strategy: expose students to AI as a tool while cultivating their critical evaluation skills. In classroom settings, instructors might have students compare human translations with machine outputs or perform post-editing exercises. This allows trainees to practice identifying machine errors, assessing stylistic weaknesses, and making culturally sensitive adjustments. Research suggests this approach can enhance students' analytical abilities and prepare them for real-world workflows where AI is embedded. At the same time, educators caution against overreliance on AI in training, as it could undermine the development of independent problem-solving and creativity [4].

The goal shall be a balanced skillset: translators should be adept with AI, but also able to translate without it when necessary, and to spot the subtle errors or losses that an AI might not catch. In sum, translator competences in the AI age include not only traditional linguistic and intercultural skills, but also technological and strategic competences: knowing which tool to use for which task, how to pre-edit texts to get better MT results, how to post-edit efficiently, and how to evaluate the reliability of an AI suggestion. Ethics and professionalism are part of this competence shift as well – trainees must learn, for example, about the importance of confidentiality when using online MT (avoiding feeding sensitive client texts into public systems) and the need to remain accountable for the final translation quality even if an AI assisted in producing it.

Technical and specialized translation – covering texts like manuals, scientific reports, legal documents, software localization, and business communications – has been at the forefront of AI integration. In these domains, the complementarity of AI is highly evident: machine translation excels at handling repetitive, terminology-heavy content with speed and consistency [4]. Neural MT engines, such as Google Translate, DeepL, or Microsoft Translator, have become increasingly proficient at producing draft translations

of technical texts that require only moderate human revision. Studies show that for many informative texts, i.e., user guides, product documentation, etc., using MT followed by human post-editing is significantly faster and more cost-efficient than translating from scratch, with only a minimal sacrifice in quality. Indeed, it is now standard practice in many sectors to deploy an MT system as a first pass and then have a translator edit the output [7]. This workflow, often referred to as machine translation post-editing (MTPE), is increasingly built into professional translation project cycles and supported by translation software. Modern CAT tools allow translators to have a translation memory suggestion and an MT suggestion side-by-side, choosing or merging as appropriate.

The efficiency gains from AI in technical translation are well documented. For example, a 2024 industry study found that incorporating DeepL into enterprise translation workflows delivered a 90% reduction in translation time for large projects, yielding a high return on investment for companies [8]. While such figures may vary by context, translators themselves acknowledge the productivity boost AI provides for routine tasks [4]. One reason is that technical texts often involve controlled language and specialized terminology. AI systems, trained on vast amounts of parallel data, can usually handle standardized phrases and terminology with high accuracy, especially when custom glossaries or domain-specific models are applied. The result is that the human translator can focus attention on correcting subtle errors, ensuring clarity, and verifying that the MT respected domain conventions. Typical corrections might include fixing minor grammar issues, adjusting formality or tone, or disambiguating terms that the MT chose incorrectly. A list of content types commonly subject to MTPE includes product documentation, user manuals, patents, support knowledge bases, and technical reports [2] – precisely the kinds of texts where consistency and correctness of terms are more critical than elegant style.

However, the integration of AI in technical translation also reconfigures the translator’s role and workflow. Translators are now often acting as post-editors or quality managers, reviewing machine output. This requires a mindset shift: instead of drafting every sentence, the translator scans for errors or unnatural phrasing in the MT output. Research indicates that this can influence the translation process and even the style of the final text. For instance, in post-editing mode, translators might be inclined to accept a machine-translated sentence structure that they would not have chosen themselves, potentially leading to more homogeneous translations across the industry [7]. There is a risk that the translator’s unique “voice” or preferred solutions give way to whatever the algorithm proposes, especially under tight deadlines. To mitigate this, professionals stress the importance of maintaining conscious decision-making: even when using MT, the translator should consider alternative translations and not automatically trust the machine’s choice if it doesn’t seem optimal [7].

In many settings, AI serves as a complementary teammate to the human translator. For example, consider a scenario in software localization: an AI engine quickly translates a software interface and user manual, while the human linguist then corrects any mistranslations of technical terms, ensures the text respects the company’s style guide, and adapts it to the local user expectations. The AI dramatically accelerates the bulk translation, but the human adds the last-mile quality assurance. This hybrid approach is of-

ten the “most viable path forward” for technical content. It’s notable that AI’s strengths align with technical translation’s requirements: accuracy, consistency, and speed. AI can memorize and apply terminology consistently every time, and can handle large volumes quickly [4]. This makes it an effective complement for translating content like a 200-page technical manual overnight – something a human alone could never do on that timeline.

That said, translators must also handle the limitations of AI in technical contexts. Machines may struggle with disambiguating terms without context, handling new or highly niche terminology, or maintaining complex cross-references in a document. They also might not know when to break a literal translation to improve readability. For example, a raw MT of a legal contract might be overly literal and require the translator to reorder clauses and adjust formulations to meet target-language legal conventions. The human expertise in understanding the intent behind the technical jargon or the function of a text within a culture remains crucial. This is why even in technical fields where AI performs strongly, professional standards (and some industry regulations) insist that a human linguist review AI translations before use [9].

The integration of AI into translation practice brings not only efficiency gains but also a host of ethical considerations. As translators and organizations navigate the complementarity of human and machine, questions of responsibility, transparency, and professional ethics become paramount. Key issues include data privacy, quality and accountability, bias and fairness, and the broader implications of relying on AI for cross-cultural communication.

Translators are often entrusted with sensitive information, such as legal contracts, medical records, and/or business documents. Using cloud-based MT systems like Google Translate or DeepL’s free version can pose confidentiality risks if not handled carefully. Many free MT tools retain submitted text and might use it for further training, or it could potentially be accessed by third parties. Ethical practice thus demands that translators and agencies ensure secure use of MT, e.g., by using paid enterprise MT solutions that guarantee data confidentiality, or by obtaining client consent before using AI on their texts. Industry guidelines increasingly highlight that if machine translation is used, especially in legal or medical settings, it must be accompanied by human review and proper data safeguards [9]. A recent discussion by the Australian translators’ association (AUSIT) noted that professional codes of conduct need updating to cover data ethics – for example, clarifying who owns the translated content produced by an AI and how it can be reused. There is concern that translators working on online platforms may inadvertently grant platforms broad rights to their translations, so transparency is needed about how AI tools handle data [10]. As confidentiality remains a cornerstone of translation ethics, AI hasn’t changed that – it has simply made the means of preserving confidentiality more complex, i.e., encryption, non-disclosure agreements with MT providers, etc.

Currently, professional norms still put the onus on the human translator or the language service provider to deliver an accurate translation. Even if a mistake originates from an MT engine, the translator who post-edited the text, or the agency delivering it, is accountable to the client. If a critical error slips through – say, a medical dosage instruction is mistranslated – the human post-editor can legally and ethically be blamed if they

overlooked a subtle error that an AI introduced. As one analysis put it, under current frameworks “liability is always attributed to a human or organization” in the chain. No ISO standard or regulation yet defines how accountability might be shared when using MT [10]. Therefore, translators must exercise rigorous quality control, perhaps even more so when dealing with AI output, since they need to catch machine-specific errors. Ethically, a translator should not rely blindly on AI; using AI is not an excuse for lowering standards. Some professional guidelines suggest that if a translator uses MT, they should disclose that to the client and ensure they have the expertise to thoroughly review the output [10]. This transparency helps manage expectations and assigns appropriate credit/blame if issues arise.

AI systems learn from existing data, which may contain cultural biases, stereotypes, or outdated language usage. For example, some MT engines have been observed to default to masculine pronouns for certain professions due to biased training data, or to struggle with honorifics and politeness levels in languages where those are important. A human translator can consciously avoid bias and use respectful language choices; an AI might not. The translator’s ethical duty is to be aware of such potential issues. If using an AI tool, they should review the text for any inadvertent bias or insensitive phrasing that the machine may have produced and correct it. There’s also the issue of cultural sensitivity: AI might translate literally and thus create a phrase that is culturally offensive or tone-deaf, which a human would know to avoid. Ethical translation means the human must intervene to ensure the translation is not just linguistically correct but also appropriate and respectful in context [11].

Recent discussions highlight that ethical use of MT is a shared responsibility: MT developers should ensure fairness and data security in their algorithms, policymakers should set guidelines, i.e., how should MT be used in courts or hospitals, and importantly, translators and post-editors must educate themselves about MT’s pitfalls and capabilities. Likewise, agencies should inform translators if a project has been pre-translated by AI, and inform clients about their use of MT, to avoid deception [7]. Building this transparency and knowledge will help prevent scenarios where a client unknowingly gets a raw MT output or a translator is forced to use a poorly performing MT without understanding the context. In essence, ethical practice in the age of AI calls for communication and clarity about how a translation was produced, and a commitment to quality and confidentiality that matches pre-AI standards. AI should be seen as a tool to be governed by human ethics, not an entity that diminishes ethical obligations. As one commentator put it, ethical considerations are not “icing on the cake” but critical to the sustainable integration of AI in translation [10] – they reduce risks and ensure that technology serves human needs, not the other way around.

The rise of AI in translation has led to significant reflections on the future of translator employment and the profession’s trajectory. Evidence so far suggests a complex picture: certain traditional translation tasks are indeed being automated, yet new opportunities and demands for human expertise are also emerging. The notion of complementarity versus substitution is directly felt in the job market.

On the substitution side, we have already seen some displacement in volume of work. An econometric study by Frey and colleagues provided quantitative backing to

what many translators suspected: the diffusion of free MT has slowed down the growth of translator jobs in some regions. Businesses that might have hired translators for basic tasks a decade ago can now sometimes use AI for “good enough” translations, especially for internal or low-stakes content. Additionally, the demand for bilingual skills in various non-translator jobs, such as customer service or information gathering, appears to be declining as machine translation becomes readily available [1]. If an English-speaking manager can quickly use DeepL to understand an email in Polish, they may not need a bilingual assistant as often. These trends raise concerns that entry-level translation work or ad-hoc translation tasks are being siphoned away by AI, reducing the total pool of work for human translators.

However, the story is far from one of straight replacement. Rather than a wholesale loss of translator jobs, what we observe is a shift in the nature of translation work. Many translators are now engaging in post-editing tasks or working in roles that require managing language technology. Language service providers (LSPs) are hiring linguists not just as translators, but as post-editors, quality assurance specialists, or MT trainers [4]. For example, a translator might spend their day refining machine outputs or creating and maintaining translation memories and custom MT engines. These tasks still demand high linguistic competence, but they also require new technical and analytical skills. Some translators have embraced this shift, finding that they can be more productive and handle higher volumes when working with MT. Others feel it has downgraded elements of the craft, turning them into editors of imperfect machine texts for lower pay. There is an ongoing debate within the profession about rates and remuneration: since MT can speed up translation, some clients push rates down, arguing the translator is doing “less work”. Translators counter that post-editing is a skilled activity in its own right and that ensuring quality within a tight turnaround is as valuable as the original translation effort [4].

Some translators are becoming consultants who advise companies on how to integrate MT effectively – for example, deciding which content is suitable for raw MT, which needs human translation, and how to implement post-editing workflows. A term that arises is “augmentation”: translators augmented by AI can take on tasks that previously might have required large teams, such as massive website localization, by orchestrating AI for initial drafts and then polishing the results. This could potentially make solo translators or small teams more competitive against larger agencies, since AI provides scalability. Conversely, large LSPs are investing in AI and setting up processes where fewer human translators are needed per project, which might reduce some freelance opportunities [4].

In terms of employment patterns, younger translators, and new graduates, who often have more tech training, may adapt more quickly, and find it natural to work with AI, whereas some veteran translators have chosen to specialize in niches or in roles that emphasize human-only translation. It’s notable that different segments of the profession perceive AI differently: surveys indicate student translators have a more positive outlook on AI as a helpful tool, whereas many experienced translators view it with caution and concern for quality and job security [4]. This generational difference suggests that, as training and familiarity increase, the translator of the future might be more of a

“language technology professional” – someone as comfortable working with a neural network as with a dictionary.

There are also broader employment implications beyond the individual translator. AI is enabling new markets for translation. As machine translation reduces costs, content that was previously left untranslated for cost reasons is now being localized. Some experts argue that while AI might reduce the need for human translation per unit of text, it so massively increases the quantity of text being translated that the overall demand for translation services may remain stable or even grow. In other words, humans and AI together are translating much more material than humans alone did before. This expansion could create new kinds of jobs, such as curating and evaluating MT output at scale, or working as an editor for AI-translated literature. The publishing example from earlier, i.e., Nuanxed producing 250+ machine-assisted book translations in two years [7], shows that entirely new workflows are emerging, which still involve human labour, but in different configurations.

Most experts foresee a hybrid future rather than a translator-less future. The consensus in recent literature is that “the most effective model is a hybrid approach where AI supports routine tasks while human translators provide depth, interpretation, and cultural adaptation”. The profession is likely to continue moving in the direction of tight integration with AI. Translators who adapt by redefining their role – leveraging AI as a tool while emphasizing their unique human contributions – are expected to thrive in the changing market. This could mean that the profile of a successful translator in the near future is someone who is part linguist, part technologist, and part cultural consultant [4].

Artificial intelligence has undoubtedly brought a transformative impact to the field of translation, reshaping how translations are produced and what competences translators must possess. However, AI’s role is best understood as both supportive and limited, rather than outright substitutive. AI-powered translation systems offer undeniable strengths – speed, efficiency, and technical accuracy – especially for handling large volumes of text and repetitive, terminology-driven content [4]. These capabilities make AI an extremely effective complement for human translators in many scenarios, enabling faster turnaround times and freeing translators to tackle more complex aspects of texts.

At the same time, current AI remains unable to fully replicate core human translation competences: cultural awareness, interpretive judgment, emotional intelligence, and creative nuance [4]. These qualities are intrinsic to high-quality translation, especially in fields like literary and marketing translation, but also in any context where meaning is subtle and stakes are high. This enduring gap confirms that human expertise continues to be indispensable for translations demanding depth, originality, and intercultural sensitivity [4]. AI may generate sentences, but it does not truly “understand” context or appreciate the values and experiences behind words, while human translators do.

In conclusion, the age of AI in translation is characterized by complementarity more than substitution, even if certain routine tasks are automated. The translator’s competences are being reconfigured – expanded to include technological savvy and strategic workflow management – but the foundational competencies of linguistic expertise, cultural competency, and ethical responsibility are more vital than ever. The task for educators, practitioners, and researchers is to continue adapting to these changes, shaping AI

integration in ways that enhance translation quality and human creativity. By doing so, the field can ensure that the essence of human communication – empathy, nuance, and connection – remains at the heart of translated content, even as AI becomes an everyday partner in the translation process [4]. The future of translation, rather than being a tale of humans versus machines, will be written by how effectively humans and machines can collaborate, each contributing their strengths to overcome language barriers in the world.

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