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ORIGINAL

Integrating ChatGPT and Generative IA apps in Specialized Text Translation and Post-Editing: An Exploratory Study

Integración de ChatGPT y aplicaciones de IA generativa en la traducción de textos especializados y la pos edición: un estudio exploratorio

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ABSTRACT

This study explores the impact of artificial intelligence (AI) in specialized translation processes, using ChatGPT as the primary tool. The research, with an empirical-exploratory and mixed-method approach, focuses on two objectives: first, to analyze the translation skills and strategies used by students employing ChatGPT to translate texts in legal, medical, and scientific fields; second, to describe the post-editing process, evaluating the techniques used to improve the accuracy and cultural adaptation of the final text. The central research question guiding the study is how ChatGPT influences the development of translation skills and what post-editing strategies students apply to enhance their translations.
The methodology involves translation practices with a group of 15 advanced students from the Bachelor's Degree in Translation at UABC, who translated and post-edited three specialized texts with ChatGPT. These exercises, conducted in three-hour sessions, also included the creation of specific terminological glossaries. A specialized rubric was used to measure translation quality, and Translog-II software recorded the time spent on each activity, assessing the efficiency and accuracy of the process.
Preliminary results indicate improved efficiency in the translation process and the final product quality through AI tools and post-editing. In the final survey, students also reported a positive perception of ChatGPT, highlighting its utility in developing specific translation competencies.

Keywords: Artificial Intelligence; Machine Translation; ChatGPT; Post-Editing; Translation Competence.

RESUMEN

El presente estudio explora el impacto del uso de la inteligencia artificial (IA) en el proceso de traducción especializado, utilizando ChatGPT como herramienta principal. La investigación, de enfoque empírico-exploratorio y mixto, se centra en dos objetivos: primero, analizar las habilidades y estrategias traductológicas empleadas por estudiantes al usar ChatGPT para traducir textos de áreas jurídicas, médicas y científicas; segundo, describir el proceso de posedición, evaluando las técnicas utilizadas para optimizar la precisión y adecuación cultural del texto final. La pregunta central que orienta el estudio es cómo influye ChatGPT en el desarrollo de habilidades traductoras y qué estrategias de posedición aplican los estudiantes para mejorar sus traducciones.
La metodología involucra prácticas de traducción con un grupo de 15 estudiantes avanzados de la Licenciatura en Traducción de la UABC, quienes tradujeron y poseditaron tres textos especializados con ChatGPT. Estos ejercicios, realizados en sesiones de tres horas, incluyeron también la creación de glosarios terminológicos

específicos. Para medir la calidad de las traducciones, se empleó una rúbrica especializada, y el software Translog-II registró el tiempo invertido en cada actividad, evaluando la eficiencia y precisión del proceso. Entre los resultados preliminares, se observa una mejora en la eficiencia del proceso traductológico y en la calidad del producto final mediante el uso de herramientas de IA y posedición. Los estudiantes también reportaron en el cuestionario final una percepción positiva hacia el uso de ChatGPT, destacando su utilidad en la formación de competencias específicas de traducción

Palabras clave: Inteligencia Artificial; Traducción Automática; ChatGPT; Post Edición; Competencias Traductológicas.

INTRODUCTION

Currently, topics related to artificial intelligence (AI), its use, and composition are of significant interest and relevance in multiple fields since it has emerged as a disruptive and innovative technology in various industries, including health, education, and even finances. Therefore, AI aids its users in optimizing complex tasks, improves decision-making, and creates new development opportunities.[1,2,3,4,5] Thus, the translation field is no exception.

As Alharbi[6,7,8,9,10] states, AI has transformed the translation process through advanced tools, such as Neural Machine Translation (NMT) systems and language models like ChatGPT, a model on which this study is based. Moreover, the author claims that despite significant progress, AI-generated translations still require human intervention, specifically through post-editing, to ensure accuracy, fluency, and cultural adaptation of the final text.

In light of the above, this empirical-exploratory study with a mixed-methods approach has two complementary research objectives 1) to analyze the translation process, as well as the skills and competencies applied using ChatGPT in the translation of three specialized texts from different knowledge areas; and 2) to describe the post-editing process carried out by students in the final stage of the Bachelor's Degree in Translation program at the Faculty of Languages, in Mexicali campus, UABC, during their translation process, assessing the strategies and techniques used to improve the quality of the finalized text. Similarly, the research inquiry this proposal aims to answer is: how does the use of ChatGPT impact the development of translation skills and competencies in translation students during the translation of specialized texts, and what post-editing strategies and techniques are applied to improve the quality of the final text?

Regarding the structure of this research report, it is organized as follows: the research question and objectives are presented in the first section. The second section addresses the theoretical foundations related to the translation of specialized texts, machine translations based on neural language models, and the functioning of ChatGPT as a computer-assisted translation tool. Subsequently, the technical and methodological aspects employed in the study are detailed in the third section. The results and findings derived from the application of the methodology are presented in the fourth section. Lastly, in the conclusions section, the achievements are critically assessed concerning the objectives set and the resolution of the research questions guiding this proposal.

Specialized translation, AI-based machine translation tools, and post-editing

Specialized Translation (ST) can be understood as a process focused on converting one linguistic code into another, characterized by the use of terms, words, and expressions specific to the technical or specialized languages. Cabré[11,12,13,14,15] argues that specialized languages are composed of terms and expressions that belong to specific fields of knowledge or professional areas. These languages are characterized by their accuracy and necessity to convey technical concepts clearly and comprehensibly. Furthermore, textual, linguistic, and terminological properties must be prioritized during the translation process, making searching for terminological equivalents crucial.[16,17,18,19,20]

Given the above, the question of machine translation (MT) advancements in handling specialized texts arises. García and Jiménez[21,22,23,24,25] highlight significant improvements in accuracy and efficiency within technical and scientific domains, reducing the time needed to produce high-quality translations. Moreover, AI-powered machine translation tools have enhanced post-editing, contributing to coherence and quality in translating specialized texts.

Regarding incorporating AI-based MTs into the translators' training, Johnson and Gómez[26,27,28] conducted a pilot study on integrating these tools into translator training, focusing on their role in developing translation competencies and shaping students' attitudes toward technology. The study concludes that these tools have been beneficial for managing large-scale projects and improving the technological skills necessary in the professional translation market. However, the authors warn that although these technologies are efficient,

some machine translation outputs often fail to meet professional standards. This underscores the need for comprehensive training, especially in post-editing and the critical evaluation of translations.

The successful integration of technological tools in translator training requires a balanced approach and appropriate training to maximize their benefits. Wang and Schmidt highlight those recent pedagogical trends in translation influenced by AI have transformed teaching practices. Curricula have been adapted to include the critical use of automated tools and post-editing. Moreover, they recommend that educators undergo continuous training to effectively incorporate these technologies into their teaching methods, ensuring students are adequately prepared for both traditional and advanced skills.

The progress of AI in translator training brings both challenges and opportunities. Silva and Baxter conducted an exploratory study examining educational programs' difficulties adapting to these new technologies. They conclude that AI tools improve efficiency in handling large volumes of text, and educational programs must evolve to equip students with the skills needed to meet the demands of the modern job market. The study emphasizes the importance of integrating these technologies to enhance the training of future translators.

Similarly, García[29] defines post-editing as the process of human intervention aimed at correcting and refining machine-translated texts to ensure their accuracy, coherence, and fluency in the target language. Bertoli and Gavioli[30,31] analyzed the role of post-editing in computer-assisted translation and concluded that it enhances both the quality and productivity of professional translators. Their findings indicate that proper training in post-editing can optimize translation outcomes and reduce delivery times, highlighting post-editing as a crucial skill in contemporary translation practices.

In short, Koehn[32,33,34,35,36] explored the challenges professional translators face when post-editing texts, which are generated by neural machine translation systems. While acknowledging advancements in the quality of these tools, the author emphasizes that post-editing remains essential to ensure the accuracy and fluency of translated products. This study offers a critical perspective on the importance of post-editing as a crucial component in the professional use of MT.

ChatGPT as a machine translation tool

Research on the applications of AI chatbots has garnered significant interest in the field of translation, as their use has become increasingly common among professionals and in translator training settings. This popularity is attributed to their ease of use for information retrieval and their functionality as machine translation tools. In this context, Choi and Kim[37,38] analyzed the impact of translation quality by comparing ChatGPT with traditional machine translation (MT) systems. The authors identified challenges with coherence and terminology in technical texts. While ChatGPT outperformed traditional MT systems in translating general and creative texts, the latter demonstrated superior accuracy in highly technical domains. On the other hand, ChatGPT showed an advantage in cultural adaptation, accurately interpreting culturemes and cultural references, resulting in more contextually appropriate translations for target audiences.

Similarly, Smith and Wang[39,40] assessed the effectiveness of ChatGPT as an MT tool, focusing on its performance in professional tasks compared to human translators and other automated systems. Their study measured the accuracy, efficiency, and adequacy across various genres and text types, including literary, technical, and legal texts, using ChatGPT. The results indicated that ChatGPT provides accurate and natural translations for general texts but struggles with terminological consistency in technical and legal texts, necessitating additional post-editing. Although its speed and efficiency are remarkable, these factors do not always compensate for its errors in specialized areas. However, regarding cultural nuances, ChatGPT surpassed traditional translation systems, positioning itself as a useful tool, that still requires human intervention for technical and specialized translations.

Miller and Thompson[41,42,43] explored ChatGPT's opportunities in modern translation practices, highlighting its efficiency and ability to integrate into professional workflows. The study emphasizes that, although ChatGPT is efficient in translating general texts, it has limitations in specialized domains, where terminological accuracy is essential. The researchers concluded that, while ChatGPT can be a useful complementary tool for human translators, complex and specialized texts require significant post-editing. Furthermore, they noted that the tool has limitations regarding decision-making in translation processes, which reinforces the need for human intervention in specialized areas to ensure the quality of the final product.

In conclusion, regarding the topic, O'Connor and Zhang[44] highlighted the limitations of ChatGPT in translation, particularly concerning accuracy in specialized languages and its tendency to produce errors in complex contexts. Although the researchers acknowledge ChatGPT's potential for the future of MT, they stress that improvements and human oversight are still required to ensure accurate and high-quality translations in technical fields. In summary, the reviewed studies underscore the importance of post-editing in enhancing machine translation quality. While tools like ChatGPT are valuable in the practice of translation, expert intervention remains essential for correcting errors and refining the final text, particularly in complex technical contexts, thus ensuring the necessary accuracy and fluency.[45,46,47,48,49,50]

Students' perceptions and Acceptance of AI in Translation

In recent years, AI has transformed various disciplines, including translation and language teaching. The use of AI-powered machine translation tools has generated growing interest within the academic community, particularly regarding their impact on translator training and students' perceptions of these technologies.[51,52,53,54] In this context, several studies have explored how students accept and use AI tools in their learning processes. Khairuddin et al.[55,56,57,58,59] conducted a study analyzing students' perceptions of AI tools as academic support, concluding that these technologies can enhance efficiency in written production and text comprehension in different languages. According to their findings, students appreciate the immediacy and accuracy of AI-generated responses, although they also express concerns about excessive reliance on these tools and the need to develop critical analysis skills when evaluating AI-generated translations.[59,60,61,62,63]

Similarly, Wang, Xu, and Liu[64,65,66,67,68,69] applied the Unified Theory of Acceptance and Use of Technology (UTAUT) model to examine students' acceptance of ChatGPT as a translation tool. Their results indicate that ease of use, perceived usefulness, and confidence in translation quality are key factors influencing the adoption of such tools. This study highlights how familiarity with technology and prior training in translation strategies can affect students' interactions with AI. Additionally, Le[70,71,72,73,74] explored the application of AI technology in English language instruction, finding that students view these tools as valuable resources for improving their linguistic skills, particularly in writing tasks and text comprehension. Complementing this research, Burkhard[75,76,77,78] examined students' perceptions of AI-based writing tools, emphasizing that their use facilitates the development of more personalized teaching strategies. These studies reflect the growing interest in integrating AI into translator education and suggest that while these tools may facilitate certain aspects of the translation process, they also pose challenges in terms of professional training and the development of critical competencies in post-editing and the evaluation of AI-generated translations.

METHOD

This research falls within the field of empirical-exploratory translation studies and employs a mixed-methods approach. Qualitative data were collected through a structured questionnaire to explore students' experiences and self-perceptions regarding the translation process and the outputs generated by AI-based translation tools. On the other hand, quantitative data were obtained from three specialized translation tasks completed by the students, covering legal, medical, and scientific topics. These translations were assessed using a rubric tailored to specialized translation evaluation. The translations were conducted using the free version of ChatGPT 3.0.

Characteristics of the sample:

This study involved 15 students in the final stage of the Bachelor's Degree in Translation enrolled in the elective course *AI Applications in Translation*, which is part of the curriculum. Additionally, these students had completed mandatory coursework focused on developing skills in using translation support tools, including creating and consulting terminology databases, corpus linguistics, and machine translation. Furthermore, the students' working languages include English as a second language, and Spanish as their native language, with translation exercises conducted from English into Spanish (direct translation).

Translation practices, their assessing and mixed data recollection

Students carried out three translation practices using ChatGPT as a machine translation tool, followed by a post-editing process. They were also tasked with creating specialized terminological glossaries based on the terms found in the translated texts. The selected focus areas for these practices included legal, medical, and scientific translation. Each task was allocated three hours, with a balanced distribution between the translation and post-editing phases.

Before commencing these activities, students received comprehensive training on utilizing ChatGPT and explored its various applications in machine translation. The completed translations were evaluated using a rubric for specialized translations, which provided clear and detailed criteria to assess the quality of work in each area of focus. This rubric was structured to evaluate diverse aspects of both the translation process and the final output, ensuring adherence to the specific standards of each discipline.

The Translog-II Software was employed, allowing for the recording of time spent on active translation, terminological searches, and the use of consultation tools. This documentation aimed to quantify the time allocated to each of these activities and assess, in minutes, the duration of the post-editing process. All sessions were organized in three-hour blocks, ensuring that the total task duration for each student did not exceed 180 minutes.

At last, upon completing the course, a structured questionnaire comprising ten questions was administered to the students to gather data regarding their experiences and self-assessment of their performance during the translation and post-editing activities. This qualitative instrument yielded valuable insights for analyzing perceptions and learning outcomes acquired throughout the course.

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Data analysis and results

This section presents the results obtained after the implementation of the methodological phase of this study. Given the nature of this research, the data analysis and presentation of results are structured in two sections: quantitative data and qualitative data, in that order.

Translation activity evaluation

A specific guideline was used to obtain the evaluation data of the translation activities, including accuracy, fluency, use of translation tools, post-editing and proofreading, quality of the terminological glossary, format, and spelling. Following the assessment of the translations performed by the participants, the results are organized in the chart below

Table 1. Specialized translation scores and averages

Participant	Scientific trans	Medical trans	Legal trans	Individual average
P1	100	99	99	99,3
P2	99	100	100	99,6
P3	97	98	98	97,6
P4	98	99	99	98,6
P5	96	97	97	96,6
P6	99	98	98	98,3
P7	100	100	100	100
P8	95	96	96	95,6
P9	97	97	95	96,3
P10	96	94	97	95,6
P11	89	96	96	93,6
P12	90	91	89	90
P13	99	98	90	95,6
P14	100	100	99	99,6
P15	97	98	100	98,3
Overall average	96,8	97,4	96,8	97,02

As shown in table 1, the students achieved high average scores, based on a scale from 0 to 100, where 95 indicates a translation with slight errors that can be corrected in a new editing process. The overall average for the group is 97,02, with the medical translation having the best performance. In contrast, the lowest averages were recorded in the areas of scientific and legal translation, with a lower percentage of 0,6 points compared to the overall average. Consequently, it is possible to point out that the participants, at this final stage, can present high-quality products and demonstrate solid translation competence. Nevertheless, it is imperative to encourage students to dedicate time to the final editing of the document and slightly review the sources of documentation, since according to the manual review of the guidelines, an opportunity for improvement was detected in these two areas.

Table 2. Average time in minutes for translation, post-editing, and editing

Participant	Effective trans (min)	Edition (min)	Post-editing (min)	Total (min)
P1	54	65	42	161
P2	45	87	44	176
P3	34	34	90	158
P4	40	28	87	155
P5	30	29	83	142
P6	34	37	96	167
P7	27	36	110	173
P8	29	29	84	142
P9	36	12	86	134
P10	35	34	87	156
P11	33	54	86	173
P12	37	64	82	183
P13	36	45	85	166
P14	32	54	94	180
P15	29	57	94	180
Overall average	35,4	44,33	83,33	163,06

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As shown in table 2, there is a predominant trend in the use of time spent on the post-editing activity. This stage, characterized by the editing of a text generated by an automatic translation system such as ChatGPT, plays a main role in the process. Notably, the group spent an average of 83,3 minutes on this activity, which is equivalent to 46,2 % of the total time spent on the translation exercises. It should be noted that the time invested in the terminology search, corresponding to the terms that the automatic translation system was unable to resolve, was integrated into the calculation of the time spent on post-editing the text.

Regarding the average time spent editing the text, the group invested 44,3 minutes, which represents 24,6 % of the total time. The activities considered in this stage include reproducing the original format, re-reading the text, terminological association, and both textual and image editing. The use of an automated translation system, such as ChatGPT, makes it possible to reduce the time required for editing, as reflected in the data presented in table 2. However, editing remains a fundamental stage in the translation process, especially in the context of student training, since it contributes significantly to guaranteeing the quality of the translation service.

The concept of practical translation, used by Andrade and Cortez, refers to the time dedicated exclusively to transferring content from a source to a target language system. This concept and indicator are particularly valuable since they make it possible to quantify and analyze the time specifically allocated to this activity within the studies on translation procedures.

In the present study, the group spent an average of 35,4 minutes, equivalent to 19,6 % of the exercises, using the ChatGPT tool to perform the translation task. Since this tool, based on text-generating artificial intelligence, was used in its free version 3.0; it has limitations, such as the impossibility of attaching complete documents. Therefore, users must resort to copy and paste large volumes of text to complete the translation. Despite these restrictions, ChatGPT proves to be an effective tool that contributes significantly to the optimization of the translation process. Table 3 shows the final score obtained in the course.

Table 3. Final student scores of the course

P1	93
P2	100
P3	93
P4	100
P5	89
P6	94
P7	100
P8	99
P9	94
P10	89
P11	80
P12	93
P13	89
P14	100
P15	100
Overall average	97,02

As shown in table 3, the students obtained an overall average score, as a group, of 97,02, which means that the group's performance was good, with slight opportunities for improvement. Nevertheless, they are competent to work on specialized translations with specific terminology using AI-powered tools.

The quantitative data indicate that the students were able to achieve acceptable translations through the use of ChatGPT, as well as to allocate specific times, which were obtained through Translog-II. However, to go deeper into the activity performed, and as previously mentioned, it is important to know the perception and self-perception of the students about this exercise, as well as the use of AI applications incorporated in their training as translators, so now we proceed to investigate the most relevant results and findings through the final satisfaction questionnaire of the course AI Applications in Translation.

Self-perception of the course and mastery of applications with AI

Student self-perception constitutes a relevant indicator for identifying opportunities for improvement in both course design and pedagogical strategies implemented within the Bachelor's degree in Translation program at the Autonomous University of Baja California, Mexicali campus. For this purpose, the questionnaire included an item that evaluated the perception of individual performance using a five-point Likert scale, where 1 represented "very low" performance and 5 "excellent" performance.

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The results revealed that 71,4 % (n=10) of the students evaluated their performance with a rubric-assessed score of 4/5, while 28,6 % (n=5) self-evaluated themselves with a 5/5, corresponding to an "excellent" performance. When comparing these self-evaluations with the final scores obtained in the course, it was observed that those students who reported "excellent" performance achieved scores within the range of 97-100/100. These findings suggest a positive correlation between self-perception of performance and objective academic results, which reinforces the usefulness of self-evaluation as a diagnostic tool to optimize both the teaching-learning processes and the formative experience of students.

A five-point Likert scale was applied to the mastery of the applications used in the course and their ease of use and management, where 1 represented "Strongly Disagree" and 5 "Strongly Agree". The results indicated that 57,1 % (n=9) of the students evaluated their mastery with a score of 4/5, while the remaining 42,9 % (n=6) selected 3/5. These data suggest that a significant proportion of the participants faced certain difficulties in handling the digital tools incorporated during the course.

Although the students had previous experience with machine translation systems, the integration of tools based on generative artificial intelligence represented an additional challenge. The convergence of multiple digital technologies (each with specific functionalities) raised the learning curve, especially when applied to complex translation tasks. This finding underscores the importance of designing more structured pedagogical strategies and providing specific training that facilitates the transition to the effective use of advanced technologies in the field of translation.

Students were also questioned, based on the same scale, as to whether applications such as ChatGPT have significantly improved their translation products. To which the group reported 57,1 % (n=9) total agreement that the tools are easy to use and incorporate into translation work. This was followed by 28,6 % (n=4) of students who selected agree (4/5), while a smaller percentage of 14,3 % (n=2) selected 3/5 on the scale, indicating that they have a medium opinion regarding the difficulty of using the AI applications and ChatGPT commands seen in class.

Students' perception of whether tools such as ChatGPT have significantly improved their translation products was also assessed using the same five-point Likert scale. The results showed that 57,1 % (n=9) of the participants selected "Strongly Agree" (5/5), indicating that they consider these tools to be easy to use and easy to integrate into translation tasks. 28,6 % (n=4) expressed agreement (4/5), while 14,3 % (n=2) reported a medium rating (3/5), suggesting a more neutral perception regarding the ease of use of the artificial intelligence applications and ChatGPT commands presented during the course.

These findings reflect that, although the majority of students positively rate the functionality of these tools, a smaller percentage still encounter some difficulty when using them. This highlights the need to continue to optimize training in the use of emerging technologies to ensure their effective and widespread adoption in the translation field.

On the other hand, the students' perception of the quality of the translations generated by ChatGPT was explored. None of the participants selected "Strongly Agree" (5/5) on the rating scale. However, 57,1 % (n=9) indicated agreement (4/5) that ChatGPT produces quality translations in specialized areas, while the remaining 42,9 % (n=6) selected a medium rating (3/5). These results suggest that, although students recognize the potential of the tool, they do not consider it to be completely infallible.

In other sections of the questionnaire, participants noted that the translations generated by ChatGPT are generally of good quality, as they do not require in-depth post-editing, which reduces the effort required at this stage. In addition, they highlighted the accuracy in the automatic generation of glossaries of specialized terms, which optimizes both the terminology search time and the translation process in general. This optimization allows students to focus most of their time on post-editing, previously identified as the most demanding phase of their translation assignments.

Another relevant data refers to the evaluation of the students' satisfaction with the final translation product obtained through the use of ChatGPT, the post-editing process, and the subsequent editing. For this analysis, the Likert scale was used again, where 5 represented "very satisfied" and 1, "not at all satisfied". 71,4 % (n=11) of the students reported a score of 4/5, suggesting that they were satisfied with the translated product. On the other hand, 28,6 % (n=4) indicated that they were totally satisfied with the quality of the translations delivered as part of the course assignments. This result is a significant indicator since the students' perception of the quality of their work seems to be closely linked to the performance reflected in the scores obtained during the course.

Regarding the frequency of use of AI tools, besides ChatGPT, students were questioned about the frequency of use of this tool, where the options were always, frequently, and rarely. figure 1 shows the percentages obtained by the 15 participants in the study.

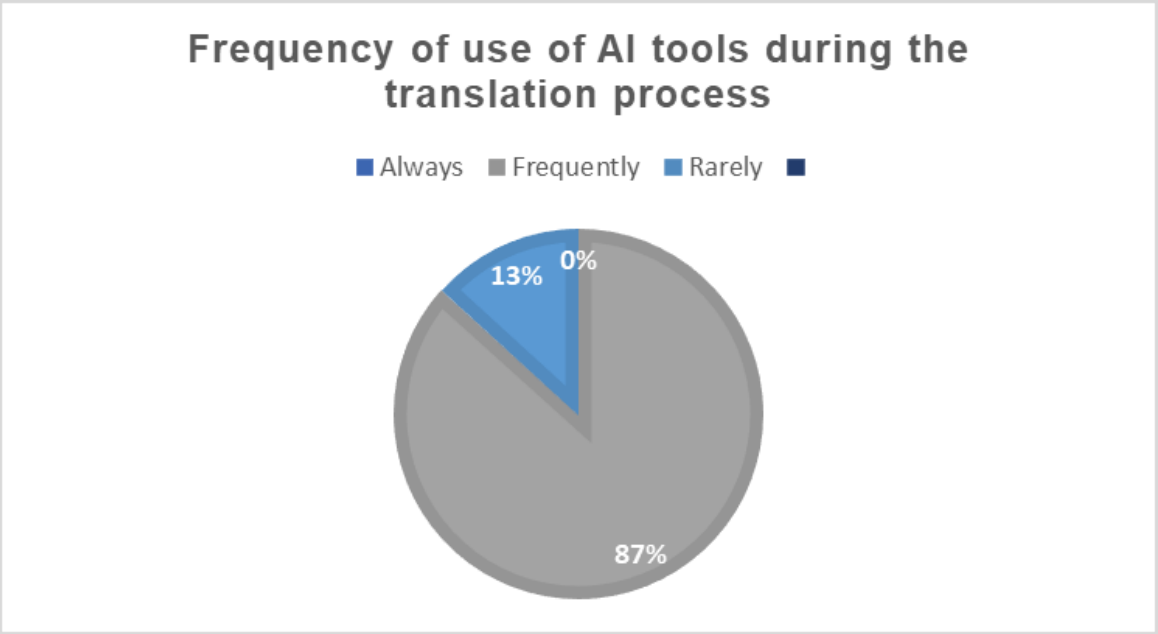

Figure 1. Frequency of the use of AI tools during the translation process

As can be seen in the graph above, 87 % of the participants in this study report the constant use of tools, while 13 % state that they do not use them during their translation process. In the same way, they were asked about the AI tools they used to elaborate their translations during their training, and they mentioned some of them: Wordfast (in its different versions), SDL Trados, Microsoft Copilot, and ChatGPT. It is interesting that from this course, the students argue that learning to design specific prompts or focus on translation, editing, and post-editing in a text-generative AI, such as ChatGPT, achieved better results and reduced translation and post-editing time. It should be noted that this type of activities was carried out in the last unit of the course, with the intention that the students could compare the importance of *prompt* design and how they can improve their results by requiring higher specifications.

As can be seen in the previous graph, 87 % (n=13) of the participants in this study report the constant use of tools during their translation process, while 13 % (n=2) report not using them. As for available artificial intelligence (AI) tools for doing their translations, students mentioned different options: Wordfast (in its various versions), SDL Trados, Microsoft Copilot, and ChatGPT.

Interestingly, due to this course, students acknowledged that learning to design specific prompts focused on translation, editing, and post-editing in a generative text AI like ChatGPT allowed them to achieve better results and significantly reduce the time spent on these tasks. These activities were implemented in the course's final unit to enable students to compare the importance of prompt design and how, by requiring greater specifications, it is possible to improve the quality and efficiency of their translations.

Perception and satisfaction regarding the use of ChatGPT and the course

This section focuses on the students' perception regarding the use of ChatGPT and the course *AI Applications in Translation* based on the results obtained from the previously mentioned questionnaire. Firstly, when asked about which tools posed the greatest challenge to integrate into their translation projects, students pointed out that SDL Trados and MultiTerm were the most challenging. They indicated that the interfaces of both tools are complex; the wide range of options they offer and the necessary processes to use their features posed a significant challenge. However, after continuously using the tools and working on several additional translation projects, they managed to functionally master them. Despite this, students mentioned that while they find these tools useful, they require considerable experience to work optimally with them.

Participants were also asked to describe the positive aspects of using ChatGPT in their translation activities. From their responses, three key points were identified: 1) orthotypographic and stylistic corrections, which significantly facilitate the final editing process; 2) The ability of ChatGPT to offer diverse translation options while largely respecting the context and fidelity of the original text, which allows users to select or construct fragments from the generated suggestions; and 3) ease of use and the speed at which translations are processed, optimizing the user's workflow.

On the other hand, students were asked to share negative experiences with the tool. Only two generalized comments were received regarding areas of improvement. The first referred to terminological precision, which, while generally adequate, showed inconsistencies in certain specific cases. The second refers to ChatGPT's

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inability, as a trial version, to preserve the original document format, which makes users spend additional time replicating the document's design manually.

Among the positive experiences reported by students regarding ChatGPT as a translation assistance tool, the generation of "good translations" in semi-specialized fields stood out. Nevertheless, a thorough terminological review was necessary to ensure precision when faced with more complex terminology. Moreover, the grammatical and stylistic accuracy of general text translations was valued, as the system provided satisfactory results. Overall, these observations concluded that the tool significantly contributes to optimizing the various phases and processes involved in translation work.

On the other hand, the group was asked to identify negative experiences related to the use of ChatGPT as a translation tool. Their responses can be summarized as follows: firstly, the system does not reproduce the original text format, requiring additional work for subsequent adjustments. Secondly, some participants pointed out that the need to specify orders and commands in detail created complications, as it demanded time and was perceived as tedious. Also, a limitation of the free version was highlighted: the inability to process complete documents, which forced users to work fragment by fragment, translating paragraph by paragraph.

The final two questionnaire questions aimed to collect students' general opinions about the course. Specifically, they were asked if they considered the course *AI Applications in Translation* had contributed to their training as future translators. Figure 2 shows the responses obtained from the fifteen participants.

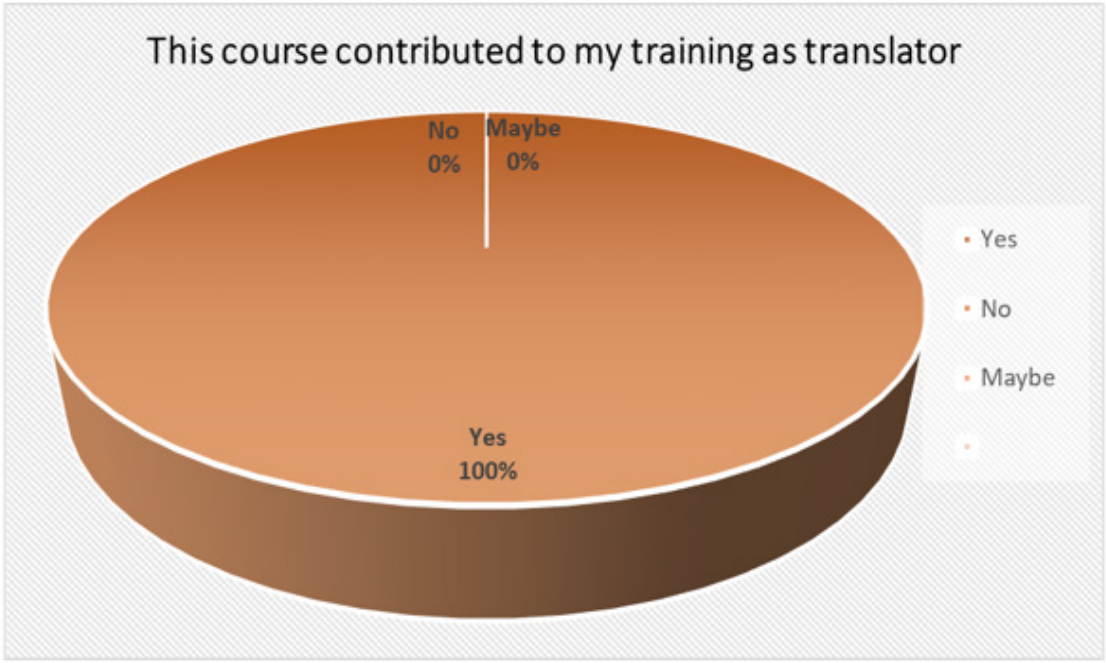

Figure 2. Perception of the course's impact on the student's training

As observed in figure 2, 100 % of the students who took the course stated that it had a significant impact on their translation training. Students argued that these tools could be used in their professional labor as translators in the future, supporting them in optimizing their work and achieving better performance and efficiency. Some of the respondents emphasized that mastering these tools will be fundamental shortly. They also affirmed their potential as resources to support translation work, allowing more time for post-editing. Also, designing good *prompts* was key in streamlining translation, editing, post-editing, and terminological management processes. In this sense, it is evident that guiding students to engage with emerging technologies that advance rapidly in the postmodern era is highly advisable. With the presentation of the results and findings from this research, the discussion and conclusions are addressed in the following section.

DISCUSSION AND CONCLUSION

The study demonstrates that the use of AI tools, such as ChatGPT, has a significant impact on the training of translation students, particularly those in the final stages of their studies. The obtained results indicate that students achieved a high translation competence, with an average score of 97,02. This performance highlights the quality of their translations, although areas for improvement were identified, especially in the translation of specialized texts such as scientific and legal documents. These findings underscore the need to thoroughly review AI-generated translations, as small terminological inconsistencies or adaptations can persist. This emphasizes that human interventions are still crucial in the translation process.

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A key aspect of the study was the time spent on each phase of the translation process. Students spent an average of 83,3 minutes on post-editing, representing 46,2 % of the total time. This indicates that even though AI tools optimize the initial translation process, the post-editing phase remains essential for ensuring the final text's quality. Efficiency in the translation and editing phases also benefited from the use of AI, which allows students to focus on more complex aspects of translation, such as cultural adaptation or specialized terminology.

In terms of the student's self-perception; most of them evaluated the impact of ChatGPT on their translations positively, particularly in creating precise glossaries and improving text coherence. However, some students faced difficulties interacting with these tools, highlighting the necessity for training oriented to the translation context. The integration of multiple technological tools also posed a challenge, suggesting that learning should be gradual, starting with basic tools before progressing to more complex functions.

The correlation between students' self-evaluation and their final scores showed that self-perception is a valid indicator of academic performance. Those who considered themselves excellent translators achieved scores that confirmed this self-assessment, which highlights the importance of including self-evaluation tools in educational programs to encourage student's self-reflection and continuous improvement.

The use of AI tools like ChatGPT significantly improved efficiency in the translation process. Reducing time spent on basic tasks and leaving more room for post-editing and text refinement. Although not infallible, these tools facilitated high-quality translations, allowing students to concentrate on more complex aspects of translation. This finding underscores the value of AI as a support in translation, complementing, but not replacing, human intervention.

The high percentage of students who frequently used AI tools, despite initial difficulties, reflects a positive attitude toward integrating these technologies into translation practice. As they advance in their training, students demonstrate improved translation quality, which suggests that AI can increase efficiency, enhance quality, and prepare students to face the challenges of a professional market increasingly influenced by technology.

In conclusion, this study confirms that integrating AI tools like ChatGPT not only improves translation quality but also optimizes the translation process by reducing time spent on basic tasks and allowing students to focus on more complex aspects. However, students must receive adequate training to use these tools to maximize their potential. Furthermore, human intervention remains essential to ensure accuracy and coherence in final translations.

Future research projects could explore how different AI tools impact the translation of specialized texts, the improvement in training in the use of these technologies within educational programs, and the influence of constant exposure to AI in developing translation competence in the long term.

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