

Analyzing the effects of translation memory systems in the production of trainee translators

Introduction

In the past decades, the increasing adoption of translation technologies, mainly translation memory systems, has promoted significant changes in the way the translation profession. As the number of texts demanding translation grows and turnaround time shrinks, it has become part of translators' workflow to recycle previously translated segments whenever possible, thus guaranteeing terminological consistence and reducing costs. Proficient use of translation tools, especially translation memory systems, is an essential skill in today's marketplace. As reported by Bowker (2015, p. 89), a survey of employers in the European translation industry revealed that the ability to use translation memory systems is considered essential or important by over three-quarters of the respondents. This requirement is explained by the increasingly higher volumes of text to be translated and delivered in ever shorter turnaround times, a fact that makes translation technologies an attractive option to increase productivity and allow translators to be competitive in their work.

Even though translation technologies, mainly translation memory systems, are becoming more widely and firmly established in the language industry, there have been reports suggesting that a considerable number of translators do not have sufficient training in the use of CAT tools (BOWKER, 2015), a fact that confirms the general idea in the literature that translation training in undergraduate courses is rarely aimed at market needs, either because professors offering these courses are no

ANALYZING THE EFFECTS OF TRANSLATION MEMORY SYSTEMS IN THE PRODUCTION OF TRAINEE
TRANSLATORS

longer working in the market, or due to the fact that their programs cater to internal needs and formats of educational institutions (Gouadec, 2007; Pym, 2009).

The concept of lack of synchronization between the academia and the translation market is also shared by professional translators, many of whom have not gone through university training in translation and, perhaps for being unaware of current changes taking place in many undergraduate translation programs, still hold on to a mindset that sees the qualification of translation graduate students as inadequate.

As described by Pym (2009):

a fairly common discourse among professional translators is that the formal training programmes are inefficient, misleading, too theoretical, irremediably out of touch with market developments, and in some instances saturating the labour market with graduates. (Pym, 2009: 6)

It may be argued that this idea conveying lack of qualification of recent graduates seems to be increasingly inconsistent with academia reality in Brazil. According to the data presented in the 2013 survey, in most institutions surveyed, faculties are slowly renewing their faculty members to include professors who also translate professionally and students, taking hands-on translation courses, are more and more being assessed on the basis of their completed translation assignments.

What seems to be the question now is how to better prepare future translators to be qualified language services providers to the international market. At present, academic qualification should involve teaching students both to effectively employ the technological tools available to speed up translation production, and to be aware of how the resources made available by these tools, mainly translation memories, may affect their work and their professional relations with those who contract their

ANALYZING THE EFFECTS OF TRANSLATION MEMORY SYSTEMS IN THE PRODUCTION OF TRAINEE
TRANSLATORS

services. In my opinion, this challenge, pointed out by Pym (2009), constitutes the core of translation training courses that strive to go beyond the mechanical routine of teaching how to translate with the aid of CAT tools. After all,

these technologies are having a profound impact on the way translators work, particularly in the localization industry. They can no longer be seen as mere 'tools' that help the translator; they actually change the nature of translating itself, obliging professionals to work not from continuous texts but from pre-translated discontinuous chunks and data bases, and thus increasing the importance of review processes. (Pym, 2009: 10)

The university may be the only place future translators will have to get their formal training and, particularly, to learn to analyze the influence of the tools they use in their work. Raising awareness of how much we are defined by the tools we use or, in the words of Cronin (2013: 10), how “the tools shape us as much as we shape them” are important steps towards building a reflective approach to the employment of translation technologies.

As technologies are changing the nature of translation work (PYM, 2011), integrating translation technologies into a translator training program can require a fundamental shift in how we view — and therefore teach — translation. Today’s translation trainees need to study and consider not only the functionalities of the systems and how they fit hardware, software and operating systems, but also the nature of the texts with which they will be working in order to determine whether technologies can be usefully applied to the translation of such texts.

Since the focus of most training courses is shifted towards the teaching and training of the various resources provided by these tools, no room is left for reflecting on their wider implications of adopting these systems to the practice of translation. Seeking to shed some light on the positive and negative effects of translation memory

systems on the translator's work, we present the preliminary results of an ongoing study, carried out at São Paulo State University (Brazil), comparing the translations of commercial texts by trainee translators with and without the assistance of a translation memory system. We analyzed the students' productions with the aid of the plagiarism software Turnitin in order to examine the similarity index between translations completed with and without the tool. The results suggest that translations assisted by translation memory systems tend to adhere to the original text much more than translations completed without this tool, which has led to the conclusion that these systems indeed influence the translator's choices and have a considerable impact on the translation production.

Development

Translation memory systems constitute important research and information tools for translators mainly for their capability of storing large amounts of bilingual data and fast retrieving excerpts of previous translations that the system considers to be a full or partial match to the translation in hand.

In order for these systems to work effectively by promoting shorter translation turnarounds and greater consistency, the terminological and phraseological translation options stored in the memory must be recycled into the new translated text to the full extent possible. While this practice seems to be associated with higher terminological quality mainly in the production of translations of technical texts, it may as well be linked to a frequently found notion of invariability of the technical language. If technical texts are deemed to require linguistic standardization, then

(semi)automation of the translator's work must ensue to protect the final text from any deviations of what has been standardized.

This idea helps explain the increasing space taken by translation memory tools in the work of translators providing services for the market of production of translated technical documentation. At first glance, consistency seems to prevail over variation in technical translations and this image entails the supposition that source repetitions may be effortlessly transferred to the new target text with the assistance of translation memory tools. However, even though these tools are inarguably efficient in assisting translators working with repetitive texts, there is always the prerequisite that previous translation memories to be recycled are accurate, which is not always the case.

The Bachelor's Degree Program in Languages with Major in Translation at the São Paulo State University opened in 1978 as the first undergraduate BA program in Translation offered by a public university in Brazil. Each year, hundreds of high-school graduates take admissions exams to be accepted in one of the 32 openings for the four-year translation program. The languages taught are English and French (as majors) and Italian and Spanish (as minors) and the best-ranked students are allowed to choose the language pair they wish to study.

In 2010, the program curriculum was updated and the course "Introduction to Translation Technologies" was introduced in the second year of the program. For a period of one semester, students are trained on the translation memory resources made available by Wordfast (in the Classic, Anywhere and Pro versions) and MemoQ, and learn about their similarities and differences in terms of interface and applications.

ANALYZING THE EFFECTS OF TRANSLATION MEMORY SYSTEMS IN THE PRODUCTION OF TRAINEE
TRANSLATORS

From the beginning of the course, students learn that one of the main advantages associated with the use of translation memory systems is the increase in the translator's productivity. Once they start working in translations of their choice, since they are specializing in different languages, the first impression they have is how the tool indeed seems to make the work easier, both by opening text boxes to insert their translations and, in the case of texts with recurring sentences, by presenting them with the previous translation.

As the professor and trainer for this course, I believe that the early contact of a translation student with an indispensable work tool (in this case, the translation memory system) is significant for his/her learning experience and developing a critical eye toward its applications. Ultimately, it may affect the construction of the image the future professional will project and, as a consequence, the negotiation of future work conditions.

As mentioned before, one of the main advantages associated with the use of translation memory systems is the increase in the translator's productivity. By allowing the reuse of portions of previous translations, the final work would be concluded faster and, thus, the translator would be free to take up other projects and consequently earn more money. Once students start working in the translations of their choice, the first impression they have is how the tool indeed seems to make the work easier, both by opening text boxes to insert their translations and, in the case of texts with recurring sentences, by presenting them with the previous translation. This may be the same notion held by any professional (with a translation academic

ANALYZING THE EFFECTS OF TRANSLATION MEMORY SYSTEMS IN THE PRODUCTION OF TRAINEE
TRANSLATORS

background or not) who has the first contact with a translation memory system at the workplace or during a training session offered by many tool vendors.

During the work in class, important inquiries arise regarding segmentation, fuzzy and full matching, for instance. Students start questioning why the system sometimes fails to recover a previous translation despite the similarities found in the new segment. It is then that they learn, in practice, that the whole operation of the system is based on mathematical algorithms put at work by a machine void of sensitivity to the context. Even though they learn how to adjust the similarity threshold depending on the text they are translating, they start to assimilate how the tool affects their production.

As the work progresses, students also learn that recurring source sentences may often require different target sentences. Since the program cannot know that, it is up to the user (in this case the translation student) to control how the translation memory content will be put to use. This instance illustrates the fact that, despite the claims that the translation memory improves translation quality by increasing consistency, there may be situations where consistency may not be desirable, for example, as Merkel (1998:145) advises, “when two sources sentences (or segments) occur in different structural contexts, such as headings and table cells, translators should be more cautious in applying consistent translations”.

Another characteristic of the translation memories, to which students are invited to consider during the classes, lies in the isolated storage of the bilingual segment pairs. This configuration of the database does not guarantee that a sentence recycled from a previous translation will read as fluently (or accurately) in another

context. By using examples taken from the translations in progress, students are encouraged to re-read the segment recovered by the translation memory system and be attentive to cohesion problems, thus avoiding the urge to accept full matches as necessarily the best (or only) option to a new translation.

Even though this “call to attention” may sound fruitless at the beginning of the training, when students seem to be dazzled by the possibilities offered by the translation memory system, I believe it is better to make them aware of the possible problems the tool may pose earlier than later on, when they will be faced with other pressures to their work, such as time constraints and the specialty of technical translations. This action may prevent the “blind-faith behavior” suggested by Bowker (2005) among novice translators who still lack experience or confidence to question the suitability of the TM’s proposals. As the author stresses:

When training translators to use TMs, it is very important to stress that the contents of the TM may not always be correct or suitable in every context. Translators must be reminded that they are still responsible for double-checking the proposals put forward by the system, and for reading and revising the text as a whole (rather than just reading and revising individual sentences) in order to produce a text that is accurate as well as readable. If a translation is produced by recycling individual sentences from a variety of different texts – which may have different terminology, different styles, pronouns or deictics that are unclear without a larger context – the result may be more of a “sentence salad” than a coherent text. (Bowker, 2005: 19)

In order to further the understanding of possible implications of adopting translation memory systems, the students are invited to take part in a study during Translation Practice II and III classes, which are taken in the third and fourth years in the course. In Translation Practice II, students work with translations of technical texts from English into Portuguese and in Translation Practice III, taken in the last year of the

ANALYZING THE EFFECTS OF TRANSLATION MEMORY SYSTEMS IN THE PRODUCTION OF TRAINEE
TRANSLATORS

course, students train translating technical texts from Portuguese into English. Both courses take place in a computer lab, so students have the opportunity to keep on using the translation memory system Wordfast in their work.

The proposed study is divided into three parts. In the first, a technical text (of approximately 900 words) is assigned for translation (in both courses) under the requirement that they are not to use a translation memory system. The first part of the activity aims to draw the student's attention to what it is like to work without the assistance of a CAT tool. Having used Wordfast for some time at this point, some students state that, even though the tool may speed up their work in some ways, they feel they can translate more freely without the mechanical restrictions imposed by segmentation.

In the second part of the study, the students receive another text of the same extent and, at this time, are instructed to use Wordfast with the specific direction to create a new memory file for the new translation. This means that they are not allowed to use other memory files that might become useful during their work, whether these memory files were created by themselves or have been made available by other students. The purpose of this activity is to help them understand that building a quality memory takes time and, even though starting from scratch may not result in immediate gains in productivity, the time invested in the construction of one's own memory may pay off later, with the possibility of recovering textual segments that reflect the translator's writing style and are hopefully free from errors or inadequacies.

In the third and last part, the students are presented with both the original text and a memory file to be used during the translation. The memory provided is modified

ANALYZING THE EFFECTS OF TRANSLATION MEMORY SYSTEMS IN THE PRODUCTION OF TRAINEE
TRANSLATORS

so as to contain a number of errors. These errors were introduced into segments that the system would later present to the students as exact or fuzzy matches. It is important to point out that, in all translations, students are allowed to use the terminological research resources they wish (on-line dictionaries, glossaries, termbases, etc.).

The resulting translations are analyzed with the use of the software Turnitin, an internet-based plagiarism-detection software that, specifically in this study, was used to generate statistical analysis of similarities between the students' translations. After some adjustments in the software's settings to narrow the search parameters, the resource OriginalityCheck can be used to provide a comparison between the submitted translations uploaded into the students' papers repository. The comparison document created is known as Originality Report. This document offers a similarity percentage for each document. The higher the percentage, the greater the amount of text identified as matching against information in Turnitin's repositories.

The Originality Check proved to be useful both in a global analysis of similarity between translations and also in a breakdown of the points where the system identified the matches against the other students' translations, as shown in the next figures:

ANALYZING THE EFFECTS OF TRANSLATION MEMORY SYSTEMS IN THE PRODUCTION OF TRAINEE TRANSLATORS

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Figure 1 – Originality Report with a color-coded similarity index indicating the amount of matching uncovered. The percentage ranges from 0% to 100%.

The statistical analysis performed by the software offers an overview of the students' work. Figure 1 presents the seven reports of translations of a sales agreement which was carried out with the help of a pre-created translation memory. In this task, a number of errors were introduced into the segments to be presented by the system as exact or fuzzy matches. Compared to the other two tasks (translation with no translation memory and translation with a new translation memory), the task with a pre-created translation memory generated the highest similarity score (up to 77%). The next figure presents a detailed view of one of the translations carried out with the pre-created translation memory:

ANALYZING THE EFFECTS OF TRANSLATION MEMORY SYSTEMS IN THE PRODUCTION OF TRAINEE TRANSLATORS

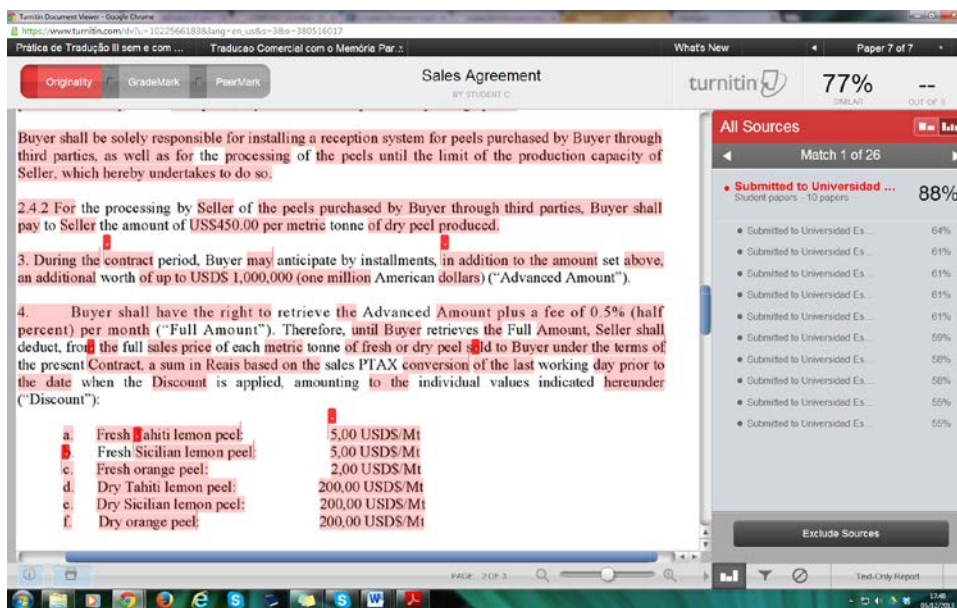


Figure 2 – Document viewer with a matching sources sidebar

A closer and individual analysis of the students' work showed that they made extensive use of the segments suggested by the translation memory system. The highlighted areas in the text indicate the matches with other translations in the repository. The overview in Figure 2 may suggest greater adhesion to the pre-translated segments recovered from the memory.

Considering that one of the main advantages of employing translation memories lies in the possibility of standardizing the translator's choices for the production of a more consistent text, the question that seems to linger is whether translation memory systems necessarily make the translator's work better. As I argued elsewhere, "when all the translator has before him/her are text segments and past translation options, it may become difficult to build a network of conceptual and semantic relations in the text being translated" (Stupiello, 2014: 195). In other words, it may become convenient for the translator to work on one segment after the other without checking terminological accuracy or drawing attention to text cohesion. The translator may end

up working exclusively on a sentence level. If we take to the last consequences the possible influences translation memory applications may have in the translator's work, we may come to believe that intuition and the notion of context might become difficult to recover as the translator is compelled to concentrate more and more on a text that has been sectioned to fit in text boxes at the convenience of the machine.

Conclusions

Including the training in new technologies in undergraduate courses may ultimately mean the difference between the mechanical training in the resources offered by the tool (as offered in training courses) and the reflective training (as may be implemented in translation academic programs). Reflecting on how to use a translation memory tool involves inviting the trainees to think about the implications of adopting technology in the choices made during the translation work and in the final product, which comprises both the translation and the translator's compiled terminological research. As Bowker (2015, p. 90) argues, the goal of a translator education program should be to "develop the strategic and reflexive skills needed for adopting best practices and for making informed decisions with regard to tool selection and use".

At the São Paulo State University, in Brazil, the results of the analysis of translations carried out with and without the aid of a translation memory system turn into insights and reflections introduced to the students during the Translation Practice courses in an attempt to better capture their attention to the effects translation memory systems inevitably have in their work. This proposal of analysis ultimately

aims to foster critical thinking on the effects of semi-automation, as students are encouraged to evaluate more carefully the options “presented” for recycling. Future research projects are being designed to explore different text types translated with and without a translation memory system, to be later analyzed statistically and qualitatively to foment the reflection on possible levels of influence of translation memory systems in the activity of translating.

Technology has become inseparable from translation and it can unarguably help translators work more efficiently and be better equipped to compete in a globalized translation market. However, as technological tools take over more and more space in translation activities, we must strive not to lose conscience of the essential human component in any translation work. From the moment we understand what makes us different from the technology we use, we will feel better prepared to justify the choices we make when translating and, eventually, negotiate work conditions consistent with the translation demands.

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ANALYZING THE EFFECTS OF TRANSLATION MEMORY SYSTEMS IN THE PRODUCTION OF TRAINEE
TRANSLATORS

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