The Transfer of CAT Tool Skills in Translation Students

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The Transfer of CAT Tool Skills in Translation Students

Master's Thesis

Supervisor: Prof. Dr. Nataša Pavlović

Zagreb, September 2023.

STATEMENT ON ACADEMIC INTEGRITY

I hereby declare and confirm that this thesis is exclusively the result of my own autonomous work based on my research and literature published, which is seen in the notes and bibliography used. I also declare that no part of the paper submitted has been made inappropriately, whether by plagiarizing or infringing on any third person's copyright. Finally, I declare that no part of the paper submitted has been used for any other paper in another higher education institution, research institution or educational institution.

To my family for all the love. To my supervisor for all the guidance.

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Abstract

In the last decade, CAT (Computer Assisted Translation) tools have become irreplaceable within the profession of translation. This is true because CAT tools make translation faster and easier, with features such as the use of termbases and translation memories, segmenting of the source text, quality assurance, etc. Bearing in mind the importance of CAT tools, implementing the teaching of CAT tools in the education of future translators is crucial. However, there are so many CAT tools that it would be virtually impossible to cover all of them during their education. Additionally, CAT tools constantly evolve, introduce new features and their updated versions. Some studies (e.g., Nunes Vieira, Zhang and Yu 2021) have shown that students can translate in CAT tools without any previous knowledge, and suggest it might be even easier for them to use one CAT tool if they had previous experience with a similar CAT tool. For that reason, this study examines the extent to which these skills are transferred. To do this, two groups of participants were compared – one group with previous experience with CAT tools, and the other group with no previous experience with CAT tools. Participants were asked to translate a short text in RWS Trados Studio, screen record their translation process, and time themselves. MA Translation students with prior experience with CAT tools were expected to be more successful in using an unfamiliar CAT tool without instruction or demonstration than MA English students with no prior experience with CAT tools. After they were done with the translation task, participants were also asked to write about their experiences and impressions in a questionnaire. Their answers were analyzed to get a more complete impression of their experience with RWS Trados Studio. The results suggest that CAT tool skills might be transferrable, but that more than a superficial knowledge of the initial tool may be required to make a difference. It is hoped that this study will encourage translation teachers to provide opportunities for students to gain mastery over at least one CAT tool to facilitate their future employment.

KEY WORDS: CAT tools, RWS Trados Studio, teaching, translation studies, translation

1. Introduction

In recent years, translation studies have witnessed a rapid evolution driven by technological advancements. One such significant development is the advent of computer-assisted translation (CAT) tools, which have revolutionized the translation process and workflow. As the demand for professional translators equipped with CAT tool skills continues to rise, it becomes crucial to explore effective approaches in teaching and transferring these skills to translation students.

The current study was inspired by the research paper titled *Click Next: On the Merits of More Student Autonomy and Less Direct Instruction in CAT Teaching* by Nunes Vieira, Zhang, and Yu (2021). This study sparked my interest in examining the dynamics of CAT tool teaching and skill transfer from one CAT tool to another. The paper focused mostly on "reducing the use of direct instructions in CAT teaching" (411). However, the authors also mention that "CAT tools represent a learning curve for those with no experience" (411). What about those who have experience? Would they be successful in a different CAT tool they have never worked with before? To answer these questions, I conducted an experiment with the primary focus on the transfer of skills from one CAT tool to another. I invited MA English students to participate and formed two groups of five people in each group. The first group (Group A) was formed for MA English Translation students who had worked in CAT tools before, but not in RWS Trados Studio. I found such participants because students were not able to access RWS Trados Studio installed at the university during online classes due to the coronavirus pandemic. I found enough participants who had not seen Trados before the beginning of the experiment in September 2022. The second group (Group B) consisted of MA English students of other specializations who had never worked in CAT tools prior to this experiment. Both groups were provided with information about CAT tools, and given specific instructions and installation tools for RWS Trados Studio, and asked to download screen-recording software. They were asked to translate a short excerpt from a microwave user manual in Trados, time and screen-record their progress and, most importantly, export their translations into MS Word. The participants had the freedom to do this task on their own computers, and were asked to send their data back and fill out a questionnaire. But first, this paper will give an overview of the most important concepts of CAT tools.

2. Background

CAT tools are "computer programs that allow to create databases (translation memories) which store all our translations (aligned into segments on sentence-level) and allow to speed up translation process and increase translation quality through translation memory-based propagation of existing translation memory entries" (Kornacki 2019: 44). Kornacki also gives an overview of the most prominent CAT tool features. The first is quality assurance: "most CAT Tools have inbuilt quality assurance features, such as auto-correct, auto highlighting of grammar errors, inconsistent numbers, missing tags, translations, etc. for the translator to fix" (44). One of the most frequently used CAT tool features is the translation memory:

> "Translation memory (TM) is a linguistic database used to store translated texts paired with their source equivalents for future reference. CAT tools refer to TMs in order to check if parts of a currently translated text have been translated before. If so, the CAT tool suggests to re-use these fragments" (107).

It is also important to know that we can use more than one translation memory while translating. We can also import and export them, which means different translators can share them. They also "allow to align source and target documents in order to create a translation memory out of previously translated material" (107). CAT tools also have termbases, which save all the terminology one might encounter. The user can create or upload their own termbase and look up a term while translating (108). Most modern CAT tools can also use machine translation as one of their resources (so the user can have the text pre-translated). There are also concordances which help the user search the translation memory to check for "specific or similar translations in context" (108). These tools also have good project management and can be used with a various formats that can be imported, translated, and exported. CAT tools are also special, because the text is always segmented:

> "Segment is the basic translation unit used by CAT tools. Most commonly a segment equals a sentence. However, the segmentation rules can frequently be adjusted to meet individual preferences or particular expectations on behalf of the client. In this respect, a segment can be defined as the shortest fragment of text that can be automatically extracted by a CAT tool. Other examples of segments include bullet points, table cells, in-tag strings, sentence fragments separated by an empty line, etc." (108)

Last, but not least, there are matches. A match is a hit in the translation memory:

"If a CAT tool finds a matching sequence of words (in relation to the currently translated text) in the TM, such sequence is called a match. Matches are always provided as text and percentage numbers next to the suggestion (to denote the extent to which the match is identical with the translated sequence). The percentage thresholds can be adjusted in CAT settings" (112)

The classification of matches that follows has been taken from Kornacki (2019) and was based on Bogucki (2009), SDL (2017) and Kilgray (2017):

- "Repetition – a segment was translated within a given project and is repeated later in the document;
- Context Match – 101% compatibility – a 'context match is better than a 100% match. To be a context match, the translation memory segment must be a 100% match for the document segment and the two segments must have the same document context. For the document segment and the translation memory segment to have the same context, they must both have been preceded by the same segment' (SDL, 2017).
- Exact match – 100% compatibility – a segment in the translated text has an identical counterpart in the TM;
- Good match – 95% – 99% compatibility – 'the source text of the segment is exactly the same as the match, but there are slight differences: numbers, tags, punctuation marks and spaces might be different';
- Fuzzy match – 94% – 70% compatibility – a TM segment and the one in translation are compatible in 70-94%. The 70% threshold is constant in many CAT tools (can be adjusted manually), with some exceptions;
- No match – no match was found in the TM" (113)

Nunes Vieira et al. (2021) conducted an experiment that focused on examining whether less direct instruction (412) could stop students from becoming "passive learners" (Liu 2014, 238, cited in Nunes Vieira et al. 2021). The authors wanted to see how well students could manage without any instructions when working with CAT tools and using "learning by doing" (1). The experiment itself was comprised of three exploratory studies. The first study had seven MA translation students complete a translation in MemoQ (a CAT tool). In the second study, those seven students were asked to complete a similar task in a different CAT tool - RWS Trados Studio (previously called SDL Trados Studio). The third study replicated the second study with ten different MA translation students. It is important to note that none of the participants had worked with CAT tools prior to this study. The task was considered successfully completed in all three studies if the participants successfully exported their

translations out of the CAT tool. The students received guidelines that stated their task, but no instructions on how to use CAT tools. They were not permitted to copy and paste their translations into MS Word or use the Internet. The students were given an excerpt from a Chinese user manual (a different but similar excerpt for each study) and were asked to translate it in the given CAT tool. After they finished the task, the participants were interviewed and asked about their impressions. The authors used remote eye trackers that recorded the students' eye movements and their screens. All the studies were conducted in a classroom, with all the students of the particular study simultaneously (417). The results were as follows: one student failed the task in the first study, all seven students completed the task successfully in the second study, and eight out of ten students completed the task successfully in the third study. The authors noted that they expected "most students to fail to complete the task," but the students completed the task with an "87.5% success rate" (424).

Lastly, there is a need to define what exactly is the transfer of skills. According to Belam (2001), transferable skills can be defined as "the acquisition of abilities which are required for the mastery of the subject to be taught but also have a wider application in other areas". For the purpose of this paper, the term "transferable skills" or "the transfer of skills" will refer to the transfer of skills from one CAT tool to a different CAT tool.

3. Aims and hypotheses

This study focuses on the transfer of CAT tool skills in translation students. The aim of this study was to answer the following research questions:

- Will the participants with previous experience with CAT tools other than RWS Trados Studio ('Group A') complete a translation task in Trados?
- Will there be a noticeable difference between the results of Group A with previous experience with CAT tools and Group B without prior experience with CAT tools? More specifically, will one group need more time to complete the task? Will the participants notice and correct the fuzzy matches in the translation memory, and how many participants of each group will successfully export their translation into Word?
- Will the participants of Group B successfully complete the task, even though they have never worked with similar software before?
- What were the participants' initial impressions of RWS Trados Studio? Did they find it user-friendly? To what extent did their previous experience help them solve the task?

Based on the above research questions, this study examined the following hypotheses:

- ➤ **Hypothesis 1**: There will be a difference in how many participants can complete the task in Group A and Group B.
- ➤ **Hypothesis 2**: There will be a difference between the results of Group A and Group B regarding the time it will take them to complete the task.

I assume that the participants in Group A will notice and correct the fuzzy matches in the task, confirm segments, copy tags, adjust the font and export their translations out of Trados. I also expect Group A will need less time to complete the task because of their previous experience with other CAT tools. Group B will have a harder time finding the right options and adjusting to the new software, so I expect it will take them more time to translate and export the excerpt. I do not expect all the participants from Group B will export the translation out of Trados.

Now that the aims, research questions and hypotheses are listed, we will go through the methodology in the next chapter.

4. Methodology

4.1. Research design

There are two groups of participants: Group A (students with previous experience with CAT tools, but not with RWS Trados Studio), and Group B (students with no previous experience with CAT tools). Both groups consist of MA English students – Group A includes students of Translation, and Group B was formed for MA students of other specializations (TEFL, Linguistics and Literature and Culture). These two groups were given the same translation task in RWS Trados Studio. The participants had two weeks to solve the task. All they required for this task was an Internet connection and their laptop or computer.

This study involved several stages, and each stage involved several methods. For the purposes of this paper, I will refer to them as follows:

1. the pre-experiment stage
2. the experiment stage
3. the post-experiment stage

The pre-experiment stage began in September 2022 when an invitation for participation in an experiment was sent using a Google form. This questionnaire was sent only to English MA students of the Faculty of Humanities and Social Sciences at the University of Zagreb. The focus of this initial survey was to gather enough participants and their data to form two groups. One group was meant for MA English Translation students who had previous experience with CAT tools, but not RWS Trados Studio. The second group was for MA English students who had no previous experience in any CAT tool. All the students had to answer the following questions:

- Year of study
- MA specialization
- Have you had any experience working with CAT tools?
- Have you ever worked in RWS Trados Studio?
- Have you ever worked in another CAT tool? If the answer is yes, state which tool or tools you worked with
- If you have used CAT tools, write when you last worked with them and (approximately) how much experience you have with them (e.g., "for one month 4-5 times" or "a year ago I used them regularly for approximately 2 months")

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Finally, they were asked to leave their e-mail address so that they could be contacted if found eligible for this experiment. The full initial questionnaire is available in Appendix 1. After almost three weeks, nineteen students volunteered by filling out the questionnaire. However, nine students had to be rejected because they had seen what the RWS Trados Studio interface looks like or had already worked in Trados. Since the purpose of this experiment was to see whether students could complete a translation task in a completely unfamiliar CAT tool, these students were not invited to participate. This means I had ten participants. Five participants stated they had never worked in any CAT tool (students of other specializations) and five Translation students wrote they had experience with Memsource (now Phrase) and/or MemoQ, but not RWS Trados Studio. This is how Group A and Group B were formed - Group A consisting of five Translation students with previous experience with CAT tools that are not RWS Trados Studio, and Group B with five students of other specializations that have never seen or worked in a CAT tool. This concluded the pre-experiment stage of this research.

After forming the two groups, the participants received an e-mail with detailed instructions for the experiment (Appendix 2) and RWS Trados Studio installation tools. This marked the beginning of the experiment stage. The instructions did not contain any information on how to use the software for translation or how to export the translation into Word. This is important, because I wanted to see if the participants would be able to find that option themselves. The first step instructed the participants to watch a short video about CAT tools. This was required to ensure that participants of Group B get basic information about what CAT tools are and what they are used for, but the video did not show RWS Trados Studio interface or demonstrate how to use CAT tools. The second step was to install RWS Trados Studio on their computers. The third step asked the participants to download a screen-recording software of their choice, but encouraged them to use one of the two previously tested ones (Movavi or Ice Cream). The fourth step explained how to start their 30-day free trial in Trados, and step five explained what the zip attachment contained, which files to use, what to do if they were not opening properly, what to click in RWS Trados Studio to start translating, and what they had to do after they finished translating. The last part of step five instructed the participants to export their translation into Word, rename that document into their surname, and send it back to me along with their measured time and their screen recording. The participants were given a deadline of two weeks to finish the task. All the

correspondence was done online, and they were free to do the task whenever and wherever they wanted.

The post-experiment stage began immediately after step five. Step six in Instructions for the experiment was to fill out the post-experiment questionnaire (Appendix 3), preferably right after finishing the translation task, so that the participants' memory was still fresh. The questionnaire consisted of six open-ended questions that asked the participants to write about various parts of the experiment: their experience, any problems that occurred during the experiment, and their thoughts on RWS Trados Studio in general (whether they found it user-friendly, easy to use, intuitive or not). Group A filled out all six questions, and Group B was asked to answer only the first five questions, because the last question was for Group A only (to what extent did their previous experience with other CAT tools help them in this task).

4.2. Material

The text the participants were asked to translate contained eleven segments of a text taken from a microwave user manual. Such texts are suitable for experiments of this kind, because they usually contain repetitive phrases, but also a lot of terminology. Three segments had a 100% match, which means the participants only had to check the translation offered by the translation memory and confirm it. Three segments had a fuzzy match, which means that the translation memory offered an incomplete Croatian sentence. The participants had to notice the difference (a part of the sentence missing) and change the target segment. Five segments were empty, which means they had to translate those segments on their own. Among the empty segments were the title and the microwave model number. The latter could simply be copied into the target segment. The termbase with all the important terms was also available to them. It is important to note that one of the points of interest was to see whether the participants noticed that the translation memory was not always a perfect match. The task can be seen in Figure 1.
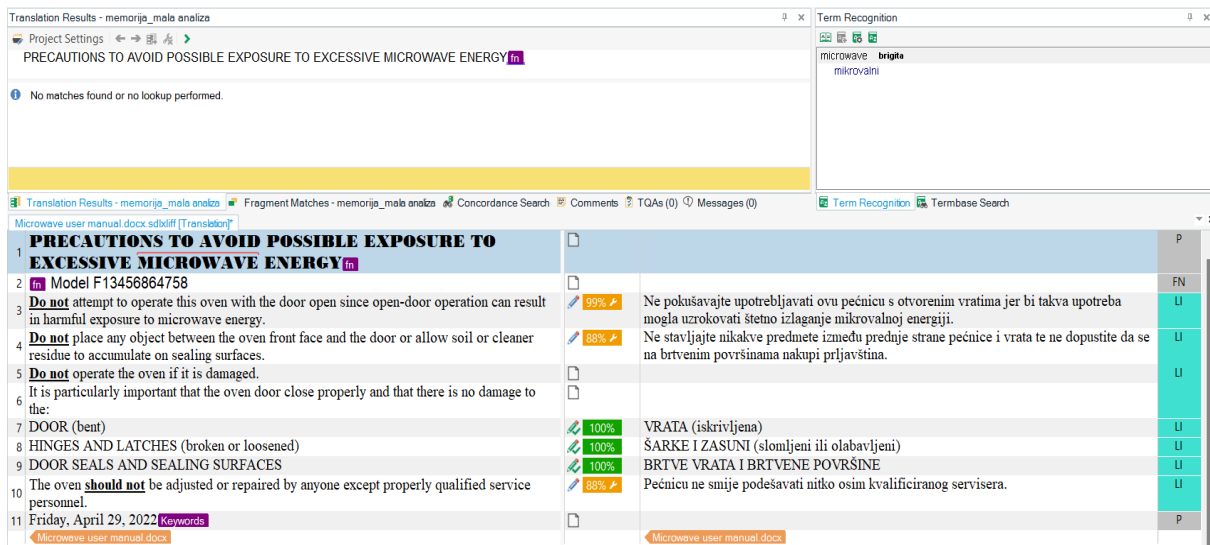
Figure 1 The task in RWS Trados Studio and the translation offered by the translation memory

The difference between the source text and the fuzzy matches is explained after the examples. The first such segment was segment 4:

> Source text (EN): **<u>Do not</u>** place any object between the oven front face and the door or allow soil <mark>or cleaner residue</mark> to accumulate on sealing surfaces.

> Target text offered by translation memory (HR): Ne stavljajte nikakve predmete između prednje strane pećnice i vrata te ne dopustite da se na brtvenim površinama nakupi prljavština.

The part "or cleaner residue" was left out of the translation memory, meaning it was up to the participants to notice that this part was missing from the Croatian sentence offered by the translation memory. Next is segment 10. This segment offered the participants an 88% match, with two words missing from the translation memory's sentence:

> Source text (EN): The oven **<u>should not</u>** be adjusted <mark>or repaired</mark> by anyone except properly qualified service personnel.

> Target text offered by the translation memory (HR): Pećnicu ne smije podešavati nitko osim kvalificiranog servisera.

In this sentence, the part "or repaired" was left out of the translation memory.

Segments 1, 2 and 11 (the date) had tags that needed to be copied to the target segment.

Since Group B had no previous experience with CAT tools, and Group A did, the findings from the experiment in the next chapter will show how each participant solved this task and whether there was any difference between the two groups.

5. Findings

5.1. Findings on group level

Two men and eight women participated in this experiment, four women and one man in each group. Nine successfully completed the task, and one (male) participant from Group B did not manage to export the translation out of RWS Trados Studio. Table 1 shows complete data for Group A (with previous experience with CAT tools).

Table 1. Results of Group A

PARTICIPANT	TASK TIME	TAGS COPIED	SEGMENTS CONFIRMED	TRANSLATED IN FULL	ADJUSTED FORMATTING	EXPORTED	TASK COMPLETED
1	21.07	+	-	+	+	+	+
2	17.36	+	+	+	+	+	+
3	04.03	-	-	-	Date only	+	+
4	10.05	Copied, but are not in Word	-	-	-	+	+
5	06.29	-	+	-	-	+	+
TIME AVERAGE: **11.76 min**							

We can see that all participants managed to export their translation into Word, but not all of them took the time to carefully read what the translation memory was offering. Only Participants 1 and 2 only adjusted the formatting, and only Participants 2 and 5 remembered to confirm segments. Participants 1, 2 and 4 copied tags, but for some reason they are not visible in participant 4's exported translation.

If the criteria for Group A were stricter, meaning that all segments had to be confirmed, parts of the sentence not translated by the translation memory noticed and translated, formatting had to be adjusted, and tags copied, only one participant from Group A would have successfully completed the task (Participant 2). Table 2 shows the results of Group A if I had set stricter criteria.

Table 2. Results of Group A with stricter criteria

PARTICIPANT	TAGS COPIED	SEGMENTS CONFIRMED	TRANSLATED IN FULL	ADJUSTED FORMATTING	EXPORTED	TASK COMPLETED
1	+	-	+	+	+	-
2	+	+	+	+	+	+
3	-	-	-	Date only	+	-
4	Copied, but are not in Word	-	-	-	+	-
5	-	+	-	-	+	-

Table 3 shows complete data of Group B (without any previous experience with CAT tools).

Table 3. Results of Group B

PARTICIPANT	TASK TIME	TRANSLATED IN FULL	EXPORTED	TASK COMPLETED
6	04.21	-	+	+
7	09.08	-	+	+
8	**13.14**	**-**	**-**	**-**
9	07.43	+	+	+
10	26.46	-/+	+	+
TIME AVERAGE: **12.06 min**				

Since Group B had no previous experience with CAT tools, and the participants had no knowledge of tags, segments, perfect and fuzzy matches, etc., it was expected they would not use those options during translation, which can also be seen later in individual findings (see Section 5.2). Group B took slightly longer on average to complete the task, but the difference is slight. Participant 9 was the only one from Group B who translated the whole text, or noticed that some parts of the text were missing in the translation offered by the translation memory. Participant 10 noticed the translation memory was incomplete, but only in one of the three segments with parts of text missing. Most of Group B focused only on translating the text and exporting the translation as soon as they found that option, which was expected.

5.2. Individual findings

After completing the task, all the participants sent back their screen recordings and the time they had taken to finish the task. They also filled out the post-experiment questionnaire. Nine of the ten participants sent back their translations.

I will first focus on the data each participant sent back. The first part of this Section lists each participant's time, observations about their screen recording (whether they copied tags, confirmed segments, used any resources outside Trados, changed the fonts to match the source text, etc.) and their answers to the post-experiment questionnaire. The second part contains the analysis of the two groups and my observations about the experiment.

The group with previous experience with CAT tools (Group A)

Participant 1

Task time	21.07 minutes
Tags copied	+
Other resources	*Glosbe, Google, Croatian language portal, Dictionary.com*
Segments confirmed	not all
Adjusted formatting	+
Noticed missing parts	+
Exported into Word	+

As can be seen from the table above, Participant 1 completed the task in 21 minutes and 7 seconds. He copied all tags and used *Glosbe, Google, Croatian language portal*, and *Dictionary.com* during the experiment. *Glosbe, Croatian language portal*, and *Dictionary.com* were used to check for translation solutions, and via *Google* he learned how to import the termbase, how to change the font in Trados, and how to export the translation from Trados to Word. He did not confirm all segments, but he adjusted all formatting to be identical to the source text. Participant 1 successfully exported their translation into Word.

Participant 1 had interesting answers to the post-experiment questionnaire. He noted that RWS Trados Studio had a "more complex interface" than the CAT tools he had worked with in the past, which made translating in Trados "somewhat more demanding." However, he wrote he wouldn't call it "unclear or unintuitive". He also described the problems that occurred during the experiment. First, Trados did not automatically load the termbase, so he

googled what to do about this and learned that he had to install Visual C++ which was available in the installation folder. He also struggled with bolding and exporting, but quickly found the solutions online. He also noted that the "translation memory and terminology base were quite useful".

When asked about the impact their previous experience had on the completion of this task, he answered that it helped him a lot because all CAT tools have similar interfaces. The logic behind the CAT tools he had worked with before (Memsource/Phrase and SmartCat) and Trados is almost identical, which is why Participant 1 "got used to the new program relatively quickly".

Participant 2

Task time	17.36 minutes (note: computer outdated and slow)
Tags copied	+
Other resources	RWS Trados Studio official webpage, *YouTube*, online forums
Segments confirmed	+
Adjusted formatting	only the date font was not changed
Noticed missing parts	the translation memory did not load
Exported into Word	+

Participant 2 took 17 minutes and 36 seconds to complete the task. She copied all tags, but the translation memory failed to load, so she went to the RWS Trados Studio's website to try to solve the problem. She also watched some YouTube videos and read a few posts in online forums about Trados to solve this issue. She loaded the translation memory manually, but it still did not offer any solutions for the target segments. She also confirmed all segments, and adjusted the formatting of most segments, except the date. Since the translation memory did not offer fuzzy matches, the segments were translated in full. She managed to export her translation into Word.

Participant 2 had a very different experience with Trados to Participant 1. On the first question in the post-experiment questionnaire about her first impressions, she wrote:

"Although I am sure that experience plays a big role in this, that is, knowledge of the program, Trados's UI (user interface) at first seems to me to be opposite of intuitive and user-friendly. The first comparison that came to mind (apologies) is a poorly assembled Tetris block, one that

requires you to assemble further shapes under time pressure if you want to continue the game. The interface is overcrowded, and there are too many options, most of which are secondary to completing the task (or at least appear to be)."

She wrote that the most important parts and options seemed too small to notice, and the whole interface was the opposite of user-friendly. Participant 2 also noted that she was using an old and outdated computer for this experiment, and shared what problems occurred while translating in Trados. With every option she clicked, she had to wait a few seconds to continue working. The program often buffered, and the task took a lot longer than she expected. She noted that her computer never behaved this way with other CAT tools. She could not find the right option to load the translation memory herself, and wrote that all icons and options seemed "repetitive" and "redundant". In the last question, Participant 2 concluded that the transition from the previous CAT tools (from Memsource/Phrase to MemoQ) was much easier than the transition from any of those CAT tools to Trados.

Participant 3

Task time	04.03 minutes
Tags copied	-
Other resources	-
Segments confirmed	no
Adjusted formatting	date only
Noticed missing parts	-
Exported into Word	+

Participant 3 took 4 minutes and 3 seconds to complete the task. She did not copy tags, confirm segments, use other resources, or notice the missing parts of the fuzzy matches. She adjusted the formatting only for the date and managed to export her translation into Word.

Participant 3 noted that RWS Trados Studio seems "outdated," "unintuitive," "complicated," and "confusing". She had no problems during the experiment to report, but also pointed out that she was constantly worried she would do something wrong because of so many options clustered on the screen. Her previous experience with Memsource/Phrase helped her with the task, but she found Trados "less intuitive" and "more complicated to use".

Participant 4

Task time	10.05 minutes
Tags copied	+ (but were not saved in Word)
Other resources	-
Segments confirmed	-
Adjusted formatting	-
Noticed missing parts	-
Exported into Word	+

Participant 4 needed 10 minutes and 5 seconds to complete the task. She copied all the tags, but her translation in Word did not reflect that. She did not use other resources, confirm segments, adjust formatting, or notice that the fuzzy matches had parts missing in the translation offered by the translation memory. She successfully exported her translation into Word.

Participant 4 wrote that she found RWS Trados Studio "very useful" and "easy to use". She had no problems reporting about Trados, and said Trados reminded her of Microsoft Office Word in some respects (bolding words, "Save as" option, etc.). She concluded that their previous experience with other CAT tools helped her, because she was "able to quickly understand how this program works".

Participant 5

Task time	06.29 minutes
Tags copied	-
Other resources	*Google*
Segments confirmed	+
Adjusted formatting	-
Noticed missing parts	-
Exported into Word	+

As can be seen in the table above, Participant 5 took 6 minutes and 29 seconds to complete the task. She did not copy tags, adjust the formatting, or notice the missing parts in the fuzzy matches. She confirmed all the segments and used *Google* to check for translation solutions. She managed to export her translation into Word.

Participant 5 also had some interesting remarks when asked about her first impressions of Trados. She said she did not notice a huge difference from Memsource/Phrase or MemoQ. Trados' layout suited her better, because the source and target text take up most of the space on the screen. She had no problems to report and concluded that all the CAT tools she worked with (including Trados) looked the same to her, which was why she quickly adapted to the new software.

The group with no previous experience with CAT tools (Group B)

Participant 6

Task time	04.21 minutes
Tags copied	-
Other resources	-
Segments confirmed	-
Adjusted formatting	-
Noticed missing parts	-
Exported into Word	+

Participant 6 was part of Group B with no previous experience with CAT tools, meaning she did not know anything about segments, tags, translation memories, etc. Therefore, Participant 6 did not copy tags, confirm segments, or adjust the formatting. It took her 4 minutes and 21 seconds to complete the task. She did not use any other resources or notice that the translation offered by the translation memory was missing a few words. She managed to export her translation into Word.

This was the first time Participant 6 saw a CAT tool's interface. She noted it was similar to MS Word and was surprised when an already translated sentence appeared in the target text area. She did not like that Trados capitalized every first word in a segment, but liked that the text was segmented.

Participant 7

Task time	09.08 minutes
Tags copied	-
Other resources	*Google*
Segments confirmed	-
Adjusted formatting	-
Noticed missing parts	-
Exported into Word	+

Participant 7 needed 9 minutes and 8 seconds to complete the task. She did not copy tags, confirm segments, adjust the formatting, or notice that some parts were missing from the fuzzy match offered by the translation memory. She used *Google* to check her translation solutions and exported her translation into Word.

Participant 7 noted Trados was different from all the programs she had worked with before. She expected a text editor like MS Word and did not find this software intuitive. To her, the interface seemed "old and outdated," but has a lot of functionality.

She also reached out at the beginning of the experiment, because the source text (microwave user manual) would not load into Trados. However, this was quickly resolved because we realized that the files were saved in different folders. Once Participant 7 put all the files in the same folder, she was able to continue with the task. On my instruction, she restarted her stopwatch once she saved all the files in the same folder and reopened Trados.

When asked to what degree her previous experience with computer technology helped her during the experiment, she wrote that only her experience with MS Word had any impact on this task.

Participant 8

Task time	13.14 minutes
Tags copied	-
Other resources	*Google*
Segments confirmed	-
Adjusted formatting	-
Noticed missing parts	Translation memory did not load
Exported into Word	**-** (note: the participant does not have Microsoft Office installed on his computer, uses LibreOffice)

Participant 8 needed 13 minutes and 14 seconds to translate the text in RWS Trados Studio. He did not copy tags, confirm segments, or adjust the formatting. He used *Google* to check his translation solutions. The translation memory did not load, so he translated everything on his own. Participant 8 was not able to export their translation out of Trados into Word or any similar format (for example LibreOffice Writer).

Participant 8 pointed out that he found the software intuitive, but was not able to adjust the font. He admitted he was in a hurry because of the stopwatch, so he did not pay as much attention to some options in Trados that could have helped him. Participant 8 concluded the software was useful because the translation process seemed less laborious while translating in the CAT tool.

Participant 8 reached out after the experiment and said he did not have Microsoft Office Word installed on his computer. At first, I thought this was the reason why he was not able to export his translation out of Trados. However, after consulting the official RWS Trados Studio's webpage (https://community.rws.com/product-groups/trados-portfolio/trados-studio/), I realized the software is compatible with LibraOffice. The RWS Group reported that some features, like bilingual review might be problematic in LibraOffice, because most settings in Trados are set for MS Word, but simply exporting a translation into the LibraOffice Writer should not be a problem. To confirm this, I went into Trados' settings and found the supported document types that can be seen in Figure 2.
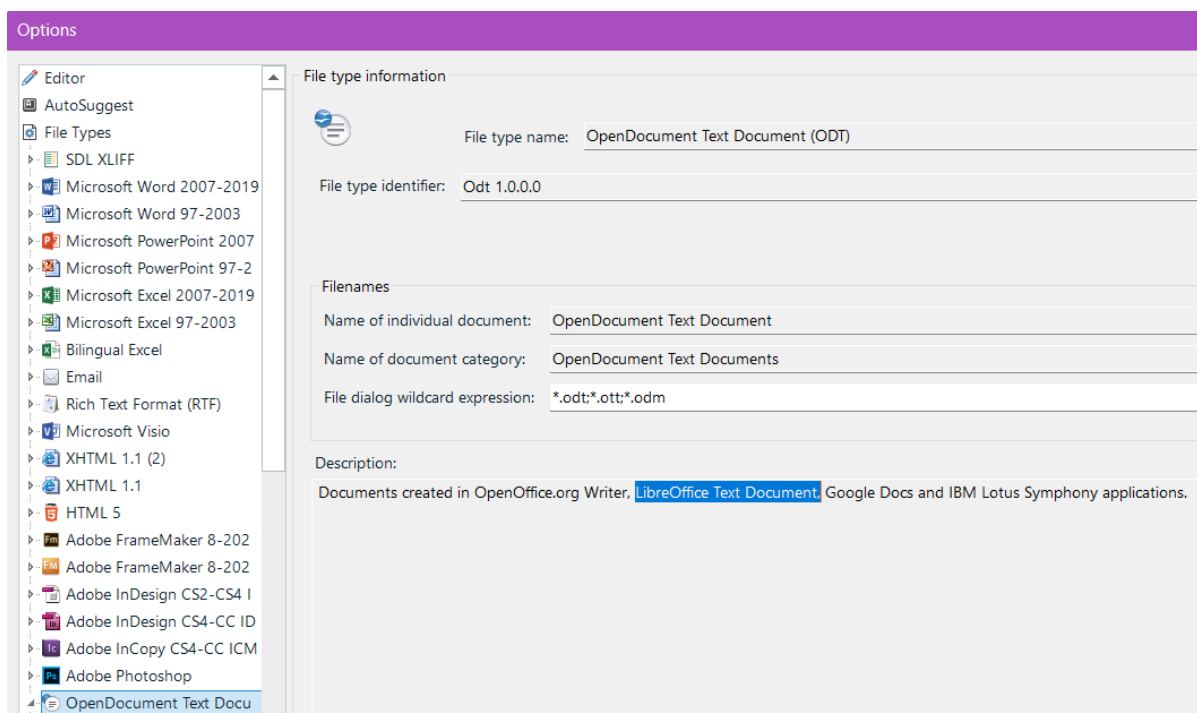
Figure 2 Proof that RWS Trados Studio is compatible with LibraOffice

Therefore, I must conclude that the fact that Participant 8 did not have MS Word installed on his computer was not the reason why he was not able to export his translation out of Trados.

Participant 9

Task time	07.43 minutes
Tags copied	-
Other resources	-
Segments confirmed	-
Adjusted formatting	-
Noticed missing parts	+
Exported into Word	+

Participant 9 needed 7 minutes and 43 seconds to complete the task. She did not copy tags, confirm segments, or adjust the formatting. She did not use any other resources, but noticed there were parts missing in the fuzzy matches, and added the missing phrases in her translation. She successfully exported her translation into Word.

Participant 9 pointed out that she found Trados overwhelming because of so many options, but she did not find the task difficult to complete. Like most participants in Group B, she

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noticed the similarity of the "File" tab with MS Word and had no problem exporting their translation.

Participant 10

Task time	26.46 minutes (note: computer is outdated and slow)
Tags copied	-
Other resources	-
Segments confirmed	-
Adjusted formatting	-
Noticed missing parts	+ (but only in one segment)
Exported into Word	+

Participant 10 took 26 minutes and 46 seconds to complete the task. She did not copy tags, confirm segments, adjust the formatting, or use any other resources. She noticed the translation offered by the translation memory was incomplete, and added the missing phrase, but only in one segment. The other two segments with fuzzy matches were left as suggested by the translation memory. She managed to export her translation into Word.

Participant 10 wrote Trados seemed intuitive to her, but she did not like that the export option was not available on the home screen. She spent a lot of time trying to find the option, and was afraid she would click the wrong option and lose her progress.

5.3. Limitations of the current study

It should also be stated that it would have been preferable if the instructions clearly stated that the screen recording should cover everything the participant is doing, not only RWS Trados Studio. This can be achieved by allowing the screen recording program to record all tabs and workspaces upon starting it. This way, we colud see exactly what the participants searched for outside of Trados.

The last thing I would like to mention is the testing environment. Ideally, the participants of each group would be in the same space, with identical equipment.

6. Conclusions

After the experiment analysis, it is important to take a step back and go through the hypotheses again.

Hypothesis 1: There will be a difference in how many participants can complete the task in Group A and Group B.

Given the data, this hypothesis is confirmed. All the participants of Group A managed to export their translation into Word, which made them successful in completing the task. However, not everyone from Group B managed to complete the task. One person failed to complete the task. Even so, as Vieira et al. suggested, this indicates that people can generally work in CAT tools even without previous experience with similar software.

However, if I decided to analyze the results by stricter criteria, only one participant (Participant 2) would have successfully completed the task. This would mean this hypothesis was not confirmed and gives me, and all other researchers interested in the transfer of skills, valuable information we should consider for future research. Participants without any previous experience (Group B) and most of the participants of Group A would not be able to complete the task by the stricter criteria, regardless that some of them have worked with CAT tools before. If their experience is not substantial (working with a CAT tool consistently for at least three months), they would still not be able to use all the features CAT tools have to offer and fail to complete the task.

Hypothesis 2: There will be a difference between the results of Group A and Group B regarding the time it will take them to complete the task.

This hypothesis was not confirmed by this experiment. Two participants, one in Group A and one in Group B, reported long loading times while working in Trados. Both participants wrote they were working on outdated computers that tend to work much slower in programs such as RWS Trados Studio. However, even without those two participants, the difference in the time average between the groups is insignificant, and no conclusions can be drawn from this data. This means that, even though it was expected that time would be an essential factor to establish the difference between the groups, it appears that other potential factors are much more relevant for gathering substantial data.

The first major factor supposed to have been of greater value is time. Although it was presumed that time would be one of the indicators of the transfer of skills in CAT tools, we

cannot reach any relevant conclusions from this data in this experiment. As I mentioned in Section 3 (Aims and hypotheses), I expected Group A would have a shorter time average due to their familiarity with CAT tools, and that Group B would take longer on average to complete the task because they would be working in a completely new software for the first time. However, neither of the above-mentioned scenarios happened, and the average time of the two groups is almost the same.

Regarding the participants of this experiment, there are several points that need to be made to make future similar experiments in a more controlled environment.

The conclusion is that it is not enough to work once or twice in a CAT tool. The participants who have only worked with a CAT tool a few times are only slightly ahead of those in Group B without experience. Only participant 1 and 2, of whom only Participant 2 did everything expected of someone with previous experience, worked long enough (one whole semester or circa three months) in CAT tools to show her experience in the results of this experiment. Therefore, the transfer of skills is possible, but only if the experience in one CAT tool is substantial. This suggests future experiments should have different groups of participants. The first option is to have two groups: one group with participants without experiencen and one group with proficient CAT tool users who have worked with CAT tools for at least one semester, or roughly three months, consistently. The second option is to add a third group with participants with some experience (those who only worked with a CAT tool a few times).

Other participants can manage their way around Trados and export their translation, but not much more. Furthermore, if the participants only translated something in a CAT tool a few times more than a year ago, it is unlikely they remember exactly what needs to be done, even though they may have known it before. Their previous experience could only be useful if the CAT tool they worked with was well mastered. It should also be considered that some studied and used CAT tools during the covid-19 pandemic and did not have direct contact with the professor since the classes were online. This could also have impacted how well they were familiarized with the CAT tool.

All in all, there is an indication of the transfer of skills, but it would require participants with extensive experience, otherwise they are not skilled enough to demonstrate a valuable difference in performance than the participants without experience.

What should also be noted is the difference between being shown or instructed how to use a CAT tool and working and practicing using the tool yourself while being instructed how to translate in CAT tools. This is something that should be considered in classes, because one cannot get extensive and comprehensive knowledge, and ultimately master using a CAT tool, if they do not engage with the software themselves.

Hence, the findings of this experiment are important, but unexpected regarding how much previous experience with CAT tools a participant should have and how the teaching of said tool was conducted. To summarize, here are the three mayor conclusions:

1. Everyone can translate something without any instructions, due to the similarity of the RWS Trados Studio's interface with Microsoft Word (cf. Nunes Vieira, Zhang and Yu 2021).

2. The participants from Group A without much experience (participants 3, 4 and 5) do not differ much from the participants in Group B with no experience with CAT tools.

3. The participants with more experience with CAT tools (participant 1 and 2) knew how and where to find helpful information about Trados, which shows they could quickly become skilled Trados users.

The initial purpose of this study was to examine whether the transfer of skills exists in translation students when it comes to the use of CAT tools. However, my research produced unexpected results and shifted my focus to new factors that need to be considered for future research. I hope these results will prompt more researchers and students to conduct similar experiments to gather a large database that could then be analyzed for more conclusive results. My other motive for this study was to examine whether recently graduated students of Translation could start working in a CAT tool environment without being familiarized with one specific CAT tool. Having the experience of working with one CAT tool for one semester might be enough to work in any other CAT tool required in the workplace without further instruction or training, but having only a few sessions of work with CAT tools may not be enough. My hope is that this and all future studies will further test this statement and make it easier for both employers and their future employees.

References

- Belam, J. (2001). Transferable skills in an MT course. *Workshop on Teaching Machine Translation*. https://aclanthology.org/2001.mtsummit-teach.2/

- Bogucki, Ł. (2009). *Tłumaczenie wspomagane komputerowo*. Warszawa: PWN.

- Kilgray (2017). memoQ 2015 help: Match Rates from Translation Memories or LiveDocs Corpora. [Online] Available from: http://kilgray.com/memoq/2015-100/help-en/index.html?match-rates-from-translation-m.html

- Klahr, D., & Nigam, M. (2004). The Equivalence of Learning Paths in Early Science Instruction: Effects of Direct Instruction and Discovery Learning. *Psychological Science*, 15(10), 661–667. https://doi.org/10.1111/j.0956-7976.2004.00737.

- Kornacki, M. (2018). *Computer-Assisted Translation (CAT) Tools in the Translator Training Process*. Lodz Studies in Language.

- Liu, J. X., (2014). Task-Based Teaching of Computer-Aided Translation in a Progressive Manner. (2014). *Translating and the Computer*, *36*(27–28), 235–242. http://www.mt-archive.info/10/Asling-2014-Liu.pdf

- Vieira, L. N., Zhang, X., & Yu, G. (2021). 'Click next': on the merits of more student autonomy and less direct instruction in CAT teaching. *Interpreter and Translator Trainer*, *15*(4), 411–429. https://doi.org/10.1080/1750399x.2021.1891515

- Reese, H. W. (2011). The learning-by-doing principle. Behavioral Development Bulletin, 17(1), 1–19. https://doi.org/10.1037/h0100597

- About Packages. (n.d.). http://producthelp.sdl.com/sdl%20trados%20studio/client_en/Projects_View/P_About_Project_Packages.htm#Project_Package

- Trados Studio. (n.d.). Retrieved from https://community.rws.com/product-groups/trados-portfolio/trados-studio

Appendices

Appendix 1 : Initial questionnaire

ENGLISH (MA) – experiment participation questionnaire

Hello,

My name is Brigita Gašparić and I am a 2nd year graduate student of English, majoring in translation.

For the purposes of my graduation thesis, I plan to conduct a short experiment (about 45 minutes) with students of the graduate study of English at the Faculty of Humanities and Social Sciences. For this experiment, I need volunteers. If you are interested, please register to participate by completing this questionnaire (2-3 min). Based on the answers, you will be assigned to a group, and you will receive further information and instructions about the experiment itself. The questionnaire will ask for your e-mail address only so that I can contact you about the experiment.
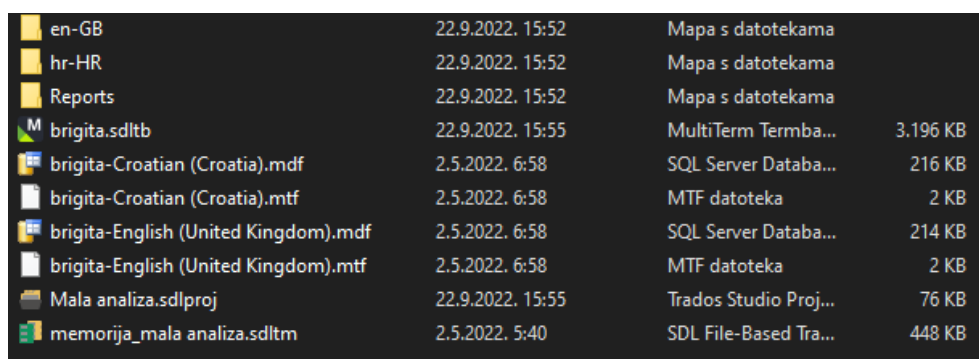
Note: If you have already worked in SDL Trados/ RWS Trados Studio during your studies, internship or at a job, unfortunately you are not eligible for this research.

Thanks in advance for signing up!

- Year of study:
- MA in (linguistics, literature and culture, translation, TEFL):
- Have you had any experience working with CAT (Computer Aided Translation) tools?
- Have you ever worked in SDL Trados/ RWS Trados Studio?
- Have you ever worked in another CAT tool? If the answer is yes, state which tool or tools you worked with:
- If you have used CAT tools, write when you last worked with them and (approximately) how much experience you have with them (e.g., "for one month 4-5 times" or "a year ago I used them regularly for a period of approx. 2 months"):
- If you would be willing to participate in the experiment, leave your e-mail address:

Appendix 2: Instructions for the experiment

1. Watch this video before starting the experiment to get some general impression of what CAT tools are and what they are used for:
    https://www.youtube.com/watch?v=A0Uwq89b91A

2. Install RWS Trados Studio: https://www.trados.com/products/trados-studio/free-trial.html. Free trial - at the bottom of the page fill in your information and under *the company* enter *the University of Zagreb* and under *occupation* put *student.* The file will be sent to you in a few seconds. I also included the app file in your zip, and you have it on my Google Drive too:
    https://drive.google.com/drive/folders/167K9ANT77F8M25RUQKIazk4FGidAtjIG?usp=sharing

3. Install any screen recording program – I suggest Movavi (https://www.movavi.com/screen-recorder/) or Ice cream screen recorder (https://icecreamapps.com/Screen-Recorder/).

4. To start your 30-day free trial you just need to enter your username and your e-mail address. Each time you start the app, just select *Continue trial.*

5. In the mail you also received a zip titled 'Experiment' - it contains a project that I made in RWS Trados Studio for the purposes of this experiment. The following are the instructions for your task:

    a. Unpack the zip file.

    b. At this point, start screen recording and start the stopwatch.

    c. After you have unpacked the zip, one file should have an extension **.sdlproj** – this is the file you are opening ('Mala analiza.sdlproj'). If that file has any other extension (e.g., xml or similar) you will go to my Google Drive and download **only that** file. In this case, everything will work for you properly.

en-GB	22.9.2022. 15:52	Mapa s datotekama	
hr-HR	22.9.2022. 15:52	Mapa s datotekama	
Reports	22.9.2022. 15:52	Mapa s datotekama	
brigita.sdltb	22.9.2022. 15:55	MultiTerm Termba...	3.196 KB
brigita-Croatian (Croatia).mdf	2.5.2022. 6:58	SQL Server Databa...	216 KB
brigita-Croatian (Croatia).mtf	2.5.2022. 6:58	MTF datoteka	2 KB
brigita-English (United Kingdom).mdf	2.5.2022. 6:58	SQL Server Databa...	214 KB
brigita-English (United Kingdom).mtf	2.5.2022. 6:58	MTF datoteka	2 KB
Mala analiza.sdlproj	22.9.2022. 15:55	Trados Studio Proj...	76 KB
memorija_mala analiza.sdltm	2.5.2022. 5:40	SDL File-Based Tra...	448 KB

d. After double-clicking that file RWS Trados Studio will open for you – confirm the continuation of free trial.

e. In the project, you will see a document titled *Microwave user guide*. On the right, make sure your chosen language is Croatian and double-click on that document.

f. The Editor in which you can start translating will now open: your task is to translate the text you received (source text) and export your Croatian translation (target text) to Word. You can stop screen recording and the stopwatch only after you have exported the document to Word. If you get stuck in any some part of the task, you are allowed to use aids to find answers.

g. When you export your translation, you will rename that Word document into your last name and send it to me via e-mail along with your screen recording and the time it took you to finish the task.

6. As soon as you do that, you will solve the **post-experiment questionnaire** (you will also receive this link in the e-mail - https://forms.gle/2QaZL8MhbhRaUjvQ8).

Thanks for participating!

Appendix 3: Post-experiment questionnaire

Dear participants!

This is a questionnaire that you should complete immediately after completing the experiment. The questionnaire consists of 5 open-ended questions. Your answers will be very important to me for writing my thesis, so please describe (at least briefly) your experience for each question. If you have time, I would appreciate more detailed answers, so feel free to write about your experience in detail.

Thank you!

- What are your first impressions of RWS Trados Studio? Do you find it intuitive and/or user-friendly?
- If you got stuck somewhere during this task, describe which part of the task you got stuck on and why do you think you got stuck in the first place.
- What did you do when you got stuck? Did you manage to solve the problem? If you used any other resources, which ones did you use and in what way?
- How much did your previous experience with other computer programs help you (or not) with this task? Describe.
- If you belong to the group of participants who had previous experience with CAT tools, answer the following question: to what extent did your previous experience with other CAT tool(s) help you (or not) in this task? Briefly explain.
- If there is some part of this experiment you would like to like your feedback on and was not covered in previous questions, share your thoughts here:

Prijenos vještina korištenja alata za strojno potpomognuto prevođenje među studentima prevoditeljstva

Sažetak

U posljednjih su desetak godina CAT (*Computer Assisted Translation* – strojno potpomognuto prevođenje) alati postali neizostavni u prevoditeljskoj profesiji. Svojim brojnim mogućnostima poput upotrebe prevoditeljskih memorija, terminoloških baza, segmentiranja izvornog teksta i upozoravanja korisnika o raznim vrstama pogrešaka uvelike olakšavaju i ubrzavaju proces prevođenja. Budući da je upotreba CAT alata toliko raširena, logično je se poučavanje CAT alata uvede u obrazovanje budućih prevoditelja. No takvih je alata mnogo, a zbog ograničenog vremena nije moguće naučiti ih sve tijekom studija. Valja spomenuti da se ti alati konstantno mijenjaju, uvode nove mogućnosti i nove verzije. Neka istraživanja poput *'Click Next': On the Merits of More Student Autonomy and Less Direct Instruction in CAT Teaching* (Nunes Vieira, Zhang i Yu 2021) pokazala su da studenti mogu samostalno savladati CAT alat te ukazuju na to da bi im možda moglo biti lakše ako su se već upoznali s takvim sličnim alatom. Zbog toga je autorica odlučila ispitati u kojoj mjeri dolazi do prijenosa tih vještina. S tim su ciljem uspoređene dvije grupe studenata – jedna grupa bez prethodnog iskustva s CAT alatima i jedna grupa bez ikakvog prethodnog iskustva s CAT alatima. Sudionici su dobili zadatak prevesti kratak tekst u RWS Trados Studiju te tijekom prevođenja snimati svoj zaslon i izmjeriti si vrijeme potrebno za izvršenje zadatka. Očekivalo se da će studenti prevoditeljstva s prethodnim iskustvom s CAT alatima uspješnije koristiti nepoznati CAT alat bez uputa ili demonstracija od studenata koji nemaju prethodnih iskustava s CAT alatima. Sudionici su nakon zadatka putem ankete obrazložiti svoja iskustva i dojmove te su njihovi odgovori analizirani kako bi se dobio potpuniji dojam o RWS Trados Studiju. Krajnji je cilj ovog istraživanja dokazati postoji li prijenos vještina te, ukoliko postoji, time potaknuti nastavnike prevoditeljskih smjerova da uvrste barem jedan CAT alata u svoju nastavu kako bi svojim studentima i njihovim budućim poslodavcima olakšali zapošljavanje.

Ključne riječi: CAT alati, RWS Trados Studio, poučavanje, znanost o prevođenju, prevođenje