

## Teaching CAT Tools to Translation Students: an Examination of Their Expectations and Attitudes

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### Abstract

This paper presents a study among 103 female translation students enrolled in a Computer Applications in Translation course at the College of Languages & Translation, King Saud University, Riyadh. The study involved completing a questionnaire both at the beginning and at the end of the semester and semi-structured interviews. Classroom observations were also used to collect data aiming at enhancing validity of the study. The study aimed to assess the students' degree of knowledge regarding Computer-Aided Translation (CAT) tools and their expectations and attitudes towards using these tools. The results of the study showed a relationship between the increase in the knowledge of CAT tools by the end of the course, and the change in students' attitudes towards the discipline. Students attitudes became much less biased and, in general, fairly positive. The study suggests that the more the student translators became familiar with CAT tools, realizing their reasonable potentials and current limitations, the less anxious they were. These findings promote the integration of technology in general, and (CAT) tools in particular, into translation classrooms in order to enhance the skills of our students' translators and maximize their opportunities in today's job market.

**Keywords:** computer-aided translation (CAT) tools, teaching, student translators, Saudi Arabia, technology

## Introduction

Over the past years, technology has been playing an increasingly significant role within the field of translation. The impact of technology has reached an extraordinary highpoint that requires careful assessment as a key aspect affecting primarily translators' competence. According to Kiraly (2000, p. 13):

Translator competence does not primarily refer to knowing the correct translation for words, sentences or even texts. It does entail being able to use tools and information to create communicatively successful texts that are accepted as good translations within the community concerned.

Unfortunately, the translation profession in the Arab World seems to ignore this fact (Galal, 1999), lagging behind the rapid technological development in today's information world. This might be linked to the early years of research in machine translation which failed to produce fully-automated high quality output and therefore reinforced an idea that there is no role for technology in the translation process. According to Bowker (2002), "the focus has shifted away from the notion that machine should be designed to replace the human translators and now is firmly concentrated on the ways in which machines can support human translators." This shift led to a relatively new field called Computer-Aided Translation (CAT) which can be described as "a variety of computerized tool to help [translators] to complete their tasks and increase their productivity" Bowker (2002).

Many researchers highlight the ongoing need to constantly keep translation curricula up-to-date according to the demands of the professional market, pointing out the issue of integrating technology into translators' training (see Bowker, 2002; Austermühl, 2006; Alcina et al, 2007; Bowker & Marshman, 2009; Frérot, 2013).

New trends in the field of translation technology that need to be integrated in translators' training today include statistical Machine Translation (MT) (Doherty et al, 2012; Belam, 2001; and O'Brien, 2002), Translation Memory (TM) systems (Doherty & Moorkens, 2013), localization (Choudhury & McConell, 2013; Jiménez-Crespo, 2013), corpora (Mahadi, 2010; Pastor & Alcina, 2009), terminology management systems (Allard, 2012), and audiovisual translation (Cintas & Díaz-Cintas, 2009). According to Jiménez-Crespo (2014, p. 52):

Nowadays, professional translation cannot be considered independent of the technologies that support it. Ideally, students should make use of all the possible translation technologies from the very beginning of their training.

Attitude is defined by Breckler & Wiggins (1992, p. 72) as "a person's evaluation of an object or thought." Ajzen (2005, p. 3) sees it as "disposition to respond favorably or unfavorably to an object, person, institution or event" Most of the studies investigating translators' attitudes towards CAT tools show that they generally have a positive attitude but show some hesitation regarding the change of the translator's role when working with such tools (Merkel, 1996).

In a study conducted by Merkel (1998, p. 140), some translators showed some "fear that translation work will become more tedious and boring, and that some of the creative aspects of the job will disappear with the increasing use of translation memory tools." In Bédard's (2000)

study there was a concern that translators may lose motivation when working with a TM because they risk becoming “translators of sentences” rather than “translators of texts”.

In a more recent study, McBride (2009, p. 175) explored translators' unprompted opinions of the issues related to TM system usage. In her conclusion she suggests that trainers are encouraged to “remain informed of current uses of and developments in TM systems and the issues surrounding their use in order to adequately and properly prepare future translators for the profession.”

Although there is now a relative wealth of translation studies literature on translator training and translation technology, there seems to be a lack of research among Arab translators. The present research aims at shading some light on the relationship between translation students and the use of computer during a Computer Applications in Translation course by answering the following question:

What is the impact of teaching CAT tools on students' attitudes and perceptions regarding Translation Technology?

### **The Study**

One hundred and three Arab female students enrolled in the translation program at the College of Languages and Translation (COLT), King Saud University, Riyadh, Saudi Arabia have taken part in this study. The participants were enrolled in the Spring 2011 Computer Applications in Translation course where they were required to take 3 hours per week in the computer lab. The course aimed to provide a practical introduction to a wide range of Computer-Aided Translation tools that translators need to understand and use. In this lecture/tutorial course, students were introduced to 6 modules covering the following topics: Why Do Translators Need Technology?, Capturing Data in Electronic Format, Corpora and Corpus-Analysis Tools, Terminology-Management Systems, Translation-Memory Systems and finally New Technologies and Emerging Trends. Along with the theoretical lectures, the course also involved a hands-on tutorials and projects where students learnt about multimedia translation (caption and subtitling) and Wikipedia translation using online tools such as WikiBhasha and Google translator toolkit. Due to the limited funding to purchase licensed software, the practical components of the course were based on freely available online services. However, students were able to look at commercial applications such as SDL Trados, Déjà vu, Multiterm, etc. through video tutorials available online.

The participants came from both the French and English departments at COLT. Both departments run five-year programs in which the first four levels (two years) are devoted to developing students' language skills in the second language (i.e. English or French) and Arabic. Students in levels five to ten are required to take specialized translation courses, where they are required to translate texts from English into Arabic.

The Computer Applications in Translation course is among level 7 courses, however some students were still in level 6 while others were at level 8 or 9. They were all taking the course for the first time and all have been exposed to translation classes in a range of fields such as administration, medical, engineering, agriculture, etc.

Participants were asked to fill out an online questionnaire during the first week of the course. Students' responses to the questionnaire gave a general view of the students' characteristics and background experiences, e.g. age, previous IT training, and general attitudes towards technology. Some of the questionnaire data was used to inform the interviews conducted later with students. During the analysis stage, the questionnaire data was compared to data

gathered from other sources, e.g. classroom observations and interviews. Such triangulation aimed at enhancing the trustworthiness of the study. A second online questionnaire was administered at the end of the course to evaluate students' experiences during the course.

The study also involved conducting several semi-structured interviews which is considered an effective method for gathering rich information from individuals or small groups. According to Foddy (1999), semi-structured interview procedures involve preparing a number of questions, in advance, that convey the focus of the study and at the same time allow conversational flexibility.

Students were interviewed either in groups or individually. This allowed the opportunity for a one-to-one encounter with most of the participants. The participants were observed and heard, with the aim to gain an insight that could not be obtained using a fill-in-the-blanks questionnaire (Foddy, 1999). Group interviews took place at the computer lab while individual interviews were conducted in my office. Participants were aware that the interviews were recorded and would be transcribed and analysed for research purposes. Participants were also assured the questions were not meant to be tricky and that there was no right or wrong answer. They were also informed that their responses would not affect their scores or evaluation. Aiming to gather as much data as possible, interviewees were asked, when needed, to elaborate further on their answers. Interviews lasted 20-60 minutes.

During this study, classroom observations were conducted interactively. Field notes were taken and transcribed on a daily basis. It involved walking around the classroom, listening to conversations, noting participants' interactions, and writing down what was heard and observed in order to describe the dynamics of the class. Patton (1990) argues that observations allow researchers to achieve a deeper understanding of the context. Such understanding cannot be gained by incorporating only interview techniques. Observations provide a greater understanding of the context in which events occur during the research, allowing researchers the opportunity to notice various aspects that participants are not aware of, or they were not willing to talk about through interviews (Patton, 1990).

The qualitative analysis started in the early stages of data collection. Although the initial analysis was approached with some analytic interests and reflections associated with the research questions, it was important to immerse in the data later on in order to explore the content's depth. This involved reading interactively and repeatedly: searching for meanings, patterns, and themes. This also entailed going through the entire sets of data even prior to coding to become familiar with all aspects of the data.

After transcribing the data, the next stage of analysis involved identifying features of the data that seemed to be interesting and creating a set of initial codes. Codes represent "the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon" (Boyatzis, 1998, p. 63). Coding at the first stages was data-driven, that is to say, there was no attempt to fit the data into a pre-existing coding frame, or any analytic preconceptions (Braun & Clarke, 2006).

Coding was carried out systematically through the entire data set, with an attempt to give full attention to all data elements especially the elements that might form the basis of recurring patterns. It was decided to carry out the coding process electronically using MS Word 2010. The editing, comment and highlighting tools in MS Word helped in tagging and naming extracts of text within each code giving extra attention to the relevant context for each data extract.

The codes were sorted in order to search for potential themes. This also involved collecting all the related data extracts within the identified themes. Tables helped with sorting

codes into themes and with understanding the relationships between the codes, themes, and how these themes related at various levels. These sets of themes and sub-themes were then revised and refined taking into account internal homogeneity and external heterogeneity (Braun & Clarke, 2006), that is to say, there should be coherency in data within these themes and themes should be clearly identified and distinguished (Patton, 1990).

At the final stage of data analysis, a clear description of each individual theme was conducted taking into account the 'story' that each theme told and how it fitted into the broader overall 'story' in relation to the research questions (Braun & Clarke, 2006). A detailed description of the findings is presented in the next section.

### **Findings and Discussion**

Although there are no attempts to generalize the findings beyond the participants in this study, readers are invited to evaluate for themselves the relevance to their own contexts of findings explained here.

The initial questionnaire shed some light on the participants' characteristics: they were all female Saudis, aged between 20-23 and they all had a basic computer training. When asked about evaluating their computer skills, 22% responded very good, 44% good and 19.6% satisfactory. Only 8 students thought they were excellent while 4 students rated their IT skills as poor. Students were asked to name some of the computer applications they use; their answers included: MS Office, Multimedia Applications, e.g. real player, Windows Media Player, and Photo editors like Adobe Photoshop. In a question about their computer use, 96% of the students revealed owning a laptop, 64.7 % are frequent users, and 28.4% use it sometimes.

The initial questionnaire showed that all students use electronic dictionaries and translation websites (Google and Bing) along with printed dictionaries. During a group interview, students revealed that most of their instructors do not use computers in translation classes and advise the students against using translation websites due to their unreliability. Other than online dictionaries and popular translation websites, students have never been introduced to any CAT tool. Despite their lack of knowledge, the majority showed an interest in learning and using such tools.

Analyzing the participants' interviews and classroom observations during the course showed a set of mixed emotions about learning and using computers: doubts, worries, anxiety, disappointment, anticipation, enthusiasm and excitement. None of these emotions disappeared or vanished completely. In fact, most of these emotions, to a certain degree, were still around even at later stages of the semester. It seems better to look at these feelings in terms of scales that correlate to time spent on the hands-on activities. The more participants engaged in using and practicing CAT tools, the more positive they felt towards them.

Students showed some anxiety when first introduced to a new topic. For instance, during the introduction of module three: corpus and corpus analysis tools, most students were acting passively, showing some lack of confidence and avoiding interaction. This kind of behavior was expected considering students' lack of information which was a major theme emerging from the analysis. Students' negative attitudes were decreasing as soon as they were introduced to the hands-on activities. They were asked to try out different types of online corpora and then participate in a group discussion describing their experience. Classroom discussions were very useful technique which allowed students to share examples from experiences linked to their own translation classes. Many students, for instance, talked about the Quran corpus and how this tool would be extremely helpful in the Islamic Translation course. Some students were taking

Islamic Translation at that time and were keen to suggest this to their instructor. Some students who already completed the course were disappointed for not being introduced to such a useful tool earlier.

Disappointment and frustration were among the major themes that emerged during data analysis. Many students had overly high expectations as to the quality and the abilities of some CAT tools. They expressed some disappointment when some of the tools they tried out did not meet their expectations. Some of these were low quality output, limited support of Arabic, i.e. L1, not user-friendly, etc. During the course, students had to learn to adjust their expectations regarding the capabilities of CAT tools by reflecting on the various ways humans and machines interact and their differences in processing data. Students learned how to have reasonable expectations with regard to these tools and instead of looking for fully automated and high quality output, pre- and post- editing should be considered as the norm. This also helped to emphasize the fact that, even with the technological advances, human translators will still have the large role in the translation process.

By the end of the term, the students in general showed a more balanced attitude and a shift towards a more positive perception. The end of term questionnaire revealed students' positive feedbacks about the course though 24 questions covering the course topics and some open-ended questions allowing students to freely express their views. Some 72% of the students strongly agreed that they became more aware of the significant role of technology in translation, 25% of the students agreed to that statement, 39% of the students strongly agreed that their ability to use the computer in translation has improved, and 43% agreed to this improvement. Students' responses are shown in Table.1

**Table 1: Students responds to the end of term questionnaire**

Question	N	Totally agree	Agree	Agree to some extent	Don't agree	Totally don't agree
1. The course improved my ability to use the computer in general.	99	25.3	42.4	27.3	3.0	2.0
2. The course improved my ability to use the computer in translation.	100	39.0	43.0	12.0	5.0	1.0
3. I am now aware of the significant role of technology in translation.	100	72.0	25.0	3.0	0.0	0.0
4. I am now able to convert a printed text to electronic using scanning & OCR.	100	51.0	36.0	13.0	0.0	0.0
5. I am now able to convert a printed text to electronic using Voice recognition systems.	99	39.4	42.4	16.2	2.0	0.0
6. I am now able to identify different types of corpora.	101	21.8	37.6	31.7	5.9	3.0
7. I am now able to use corpus analysis tools.	100	18.0	41.0	33.0	4.0	4.0
8. I am now aware of how Terminology-Management Systems work.	101	15.8	37.6	29.7	13.9	3.0

9. I am now aware of how Translation Memories work.	100	27.0	42.0	25.0	4.0	2.0
10. I am now able to choose the CAT tools according to my needs.	99	31.0	48.0	16.0	3.0	2.0
11. I am now aware of the limitations of CAT tools.	100	34.3	47.5	14.1	3.0	1.0
12. I found that the lecture were very useful.	100	30.0	40.0	15.0	5.0	10.0
13. I found that the example presented were very useful.	101	59.4	32.7	6.9	1.0	0.0
14. I found that the applications presented were very useful.	100	71.0	20.0	8.0	1.0	0.0
15. I found that the learning resources provided were very useful.	101	65.3	24.8	7.9	0.0	2.0
16. I found that the practical tasks were very useful.	101	58.4	29.7	9.9	1.0	1.0
17. I am satisfied with the teaching approach.	100	59.0	3.4.0	7.0	0.0	0.0
18. The applications presented were very useful in other translation courses.	101	21.8	43.6	17.8	11.9	5.0

In an open-ended question, students were asked to describe their experience during the course. For example, most students commented positively stating:

- I am completely amazed by the course!! I discovered a whole new world in translation we knew nothing about!!
- The course really helped us to learn very useful applications for us translators.
- I honestly was complaining that the course is too difficult but I admit I learnt a lot.
- I learnt new things feeling the sense of accomplishment.
- I really felt that this course is up to date, I am really amazed.

Many students enjoyed the hands-on activities, hoping for reducing the theoretical part of the course to allow extra time to practice. Some of their comments are listed below:

- I suggest reducing the theoretical content and concentrating on the practical part of the course.
- The theoretical part was too complicated, I wish if we had more time for practice!
- The tasks were very interesting, motivating, all the students enjoyed it more than the lectures.

Students also commented that taking this course in level 5 or 6 would be more convenient. Students in these levels are introduced to translation in a variety of fields and they will be able to

apply what they learned and use CAT tools in these courses. Many students pointed out the importance of providing licensed software in the computer lab to maximize their practice opportunities rather than limiting the practical components on freely available applications.

During the interviews, students were asked to describe the factors that might hinder their use of CAT tools. Their answers are summarized below:

- Lack of confidence in IT skills.
- Difficulties in finding applications that fully support Arabic.
- Instructors' negative attitude towards technology.
- The high prices of commercially available applications.

### Conclusion

This study has several indications aimed at translation curricula designers and translation instructors. Data analysis shows that at the beginning of the course students had a very poor and confused knowledge about the use of technology in translation in general. However, they showed that they could in fact positively absorb the exposition to a new area such as CAT tools. Despite some doubts and worries at the beginning of the course, students demonstrated high levels of motivation to learn and were keen to apply the skills they acquired in this course to other translation courses.

The study highlights the need to teach students both the potentials and the limitations of technology in order to have reasonable expectation with regard to these tools. Rather than looking for fully automated and high quality output, students should see pre- and post- editing as an important stage in the translation process.

The study shows that introducing and integrating technology into translation curricula is highly recommended, and proves successful in terms of enhancing students' skills and maximizing their productivity. As instructors for such courses, we should be aiming at integrating more hands-on activities and meaningful tasks rather than focusing on theoretical aspects. Students should be encouraged by translation instructors to apply CAT tools during their classes.

It is important to prepare our students on how to deal with new technologies and their associated challenges during their studies, before they go through the "high-volume, high-stress environment of today's professional workplace" (Bowker & Marshman, 2009, p. 2). Kiraly (2000, p. 13) argues that:

There is a difference between helping students to develop 'translation competence', which gives them the skills to produce an acceptable target text in one language on the basis of a text written in another, and aiding them in the acquisition of 'translator competence', which also involves assisting them with the development of a host of other skills, including proficiency in new technologies.

Further research is suggested to investigate instructors' perceptions of CAT tools as well as the male students. Effects of CAT tools on the translators' behavior and translation process are still open for further investigation.

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