

Task-based Teaching of Computer-aided Translation in a Progressive Manner

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ABSTRACT

The teaching of computer-aided translation is commonplace in academic institutions in recent years. More research has been done and more works have been published in this area. While much has been written on the theoretical and conceptual aspects of computer-aided translation and the contents of the course, little has been done on its practical aspect.

This workshop will present the classroom practice modules of the Introduction of Computer-aided Translation, an MA course at the Department of Translation of The Chinese University of Hong Kong. The author will discuss how to teach the use of computer-aided translation systems in a progressive manner through demonstrations and classroom practice, and from basic functions to advanced operations.

This workshop will also present some pedagogical reflections on the teaching of computer-aided translation systems.

It is hoped that it will lead to a rethinking of the way of computer-aided translation systems should be taught.

What it intends to propose is to bring the learning of translation technology closer to the real world through systematic training, thus responding to the changing professional requirements that translators face in their workplace.

1. Introduction

Computer-aided translation (CAT) systems, a.k.a. translation memory systems or software, refer to the translation environment integrated a selection of tools for alignment, data analysis, project management, quality control, terminology management, and translation memory management, to increase the productivity of professional translators.

The massive use CAT systems of has spread from localization companies to traditional translation agencies, and freelance translators in the recent years in the Mainland China and Hong Kong. Knowledge of computer-aided translation has become more common seen in the job

requirements of translator recruitment. Interests on learning CAT systems increase accordingly among translation students (Zhu, 2010).

In China the knowledge can be acquired from the software developers, translation agencies, and forums of translation and localization, and academic institutions. The first three usually provide ad-hoc instructions and task-oriented and function-specific tutorials (e.g. aligning translated files, creating a translation project). Therefore, the training provided by academic institutions should be conducted in a more systematic way.

In the last decade, Chinese academic institutions began to open courses relating to computer-aided translation in for translation majors or foreign language-related majors at undergraduate and postgraduate level. For example, Practice of Translation Technology is an elective course in the curriculum of master of translation and interpreting (MTI) program in Peking University, Tsinghua University, Nanjing University and similar courses are offered more than 10 other universities in the Mainland China. In Hong Kong and Macau, similar courses are also found in The Chinese University of Hong Kong, The City University of Hong Kong, The Hong Kong Polytechnic University and University of Macau.

After a preliminary research, the author finds that most of the courses offered inadequate practice of CAT systems (Wang, 2013) and how they should be taught has been un- or under-explored. The obstacles are probably similar with the those hinder the integration of technologies in translation programme discussed by Bowker and Marshman (2009), involving training the trainers, accessing relevant resources for use with technologies, addressing the needs of a wide range of student learners.

The author has been provided training assistance of various CAT systems at a course named Introduction to Computer-aided Translation for three consecutive years at Department of Translation, The Chinese University of Hong Kong. The course outline, the CAT systems taught in the course and the source texts used as the translation tasks are adjusted every year according to the teaching experience of the pervious year. A cumulative hierarchical learning process is gradually developed and a task-based teaching approach is adopted in the teaching CAT systems, which is presented in this paper. It also provides some pedagogical reflections in the light of some specific problems encountered in the training of computer-aided translation systems.

2. Teaching CAT systems

Introduction to Computer-aided Translation is a 3-unit required course for MA in Computer-aided Translation Programme and an elective course for MA in Translation Programme at the Department. It is offered at the first term for both full-time and part-time students who may have some translation experience but little experience of using CAT systems. The aim of the course is to introduce the use of translation technology in translation practice. The course is carried in the multimedia laboratory. Every student is ensured to have one desktop computer for practice in the class. The hands-on experience happens with a range of CAT systems taught or introduced in the course. The course normally consists of 13 classes, each of which lasts 2 hours and 15 minutes.

The course introduces various translation technologies yet the concentration is on the CAT systems. Indeed, in its broadest sense, the concept of computer-aided translation can be understood as “the use of a number of computerized tools by the human translators to increase their productivity.” (Chan, 2004) In this sense, the course can introduce tools such as using electronic dictionaries, bilingual corpus, grammar checkers, and optical character recognition (OCR) software that used by general users and assist translator’s work as well. But this paper will only focus on teaching CAT systems because all kinds of CAT tools have provided by the systems.

2.1. A cumulative hierarchical learning process

Technophobia is true for some students in the class, even though, presumably, students at this course should understand they are about to use a lot of new software and have interest on taking advantage of technology. It is recommended to start from something easy and gradually increase the complexity of the knowledge. Therefore, A cumulative hierarchical learning process is introduced to class according to the Knowledge and Cognitive Process dimensions of the revision of Bloom’s Taxonomy (Krathwohl, 2002).

The original Taxonomy of Educational Objectives provides an organizational structure and is often used as a scheme for classifying educational objectives. The four categories in Knowledge dimension and six categories in Cognitive Process dimension are arranged in hierarchical framework: from simple to complex and from concrete to abstract. “The mastery of each simpler category was the prerequisite to the mastery of the next more complex one” (ibid.)

The core idea of teaching of computer-aided translation is to train students in a progressive manner. That is to say, build the foundation first and the achievement of the next and more complex knowledge or ability is based on the acquisition of the prior one. The following is a brief overview of what the knowledge in computer-aided translation should be subcategorized and included.

- A. Basic concepts in computer-aided translation that students must know to use the software, e.g. translation memory, alignment, terminology database, quality control and project management.
- B. Relation of the basic concepts and classifications of CAT systems, e.g. how aligned parallel texts create translation memory, and difference between standalone and networked systems.
- C. Procedure and criteria of computer-aided translation, e.g. how to translate a document and what document format is supported.
- D. Strategic knowledge, e.g. the selection of suitable computer-aided translation for a translation task.

The course contents in the 13 classes is arranged according to the above category. Each of the first 12 classes only focuses on only one concept and the skills related the concept. For example, translation memory is without doubt the first concept introduced to students. In the last class students are required to finish a task in groups using any software to practice the skills taught in the course.

Also, in the beginning of the course students learn the systems as freelance translators who often work independently and gradually students are asked to work together and experience collaborative translation as a team at the end of the course.

2.2. Task-based teaching

Since most students enrolled in the course have very little experience of using CAT systems, the teacher normally plays a central role—explaining everything and giving instructions at the each step in the learning process. At first the author adopted this teacher-centred approach and found that it did have some advantages, especially in the control over the class. Thus, it was easier to carry out intensive practice within a short period of time. However, the students became passive learners and it seemed that most of them were unwilling to try new functions on their own. Eventually this approach was abandoned.

A task-based teaching of computer-aided translation is proposed in the paper. The idea is originated from a revision of task-based teaching of business translation proposed by Defeng Li (2013). Task-based teaching (TBT) is a method initiated and widely used in the filed of second language acquisition. Li made adjustments and adapted the model to the teaching of translation in general and business translation and his revised model consists of the following six stages:

Pre-task, task, reporting, analysis, revision and reflection. (ibid.)

The above order of the cycle is basically retained in the proposed task-based teaching of business translation but with important changes. One stage is renamed and two are merged together.

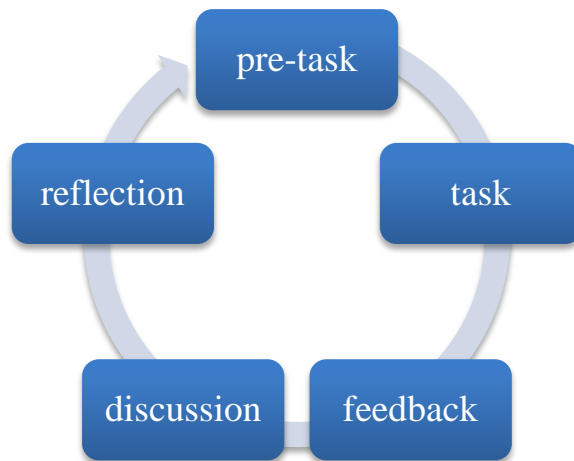


Figure 1: A cycle of task-based teaching computer-aided translation, a revision of Li’s TBT

The task-related aspects are kept. Reporting is renamed as Feedback to emphasize the teacher-student interactions. Since the Analysis and Revision stages are intended to assess and improve the textual translation, they are merged into one stage named Discussion that better reflects the process. For the sake of brevity, it is organized in the form of a table.

A. Pre-task – Preparation of relevant knowledge
<ul style="list-style-type: none"> • The teacher introduces the new concept and helps students recall relevant knowledge / skills in the previous lessons;

<ul style="list-style-type: none"> • The teacher provides necessary resources such as source text and translation memory;
<ul style="list-style-type: none"> • The students conduct extensive readings of the concept and the CAT system to be used in the task;
<ul style="list-style-type: none"> • The students fully understand the task;
<ul style="list-style-type: none"> • The students discuss their procedure of doing the task in groups when necessary.
B. Task – Carry out task
<ul style="list-style-type: none"> • The teacher provides students with guidance of the procedure of using specific functions in the computer-aided translation system;
<ul style="list-style-type: none"> • The teacher monitors students completing the task and executes time control;
<ul style="list-style-type: none"> • The students carry out the task following the procedure provided by the teacher or implementing the procedure agreed by their groups.
C. Feedback – Sharing knowledge acquired during the task
<ul style="list-style-type: none"> • The teacher encourages students’ sharing of any knowledge relating the usage of the systems;
<ul style="list-style-type: none"> • The students summarize their process, report their problems or difficulties encountered during the task;
D. Discussion – Analysis of the problems and finding solutions
<ul style="list-style-type: none"> • The teacher coordinates the discussion session;
<ul style="list-style-type: none"> • The students contribute their solutions and discuss them with peers;
<ul style="list-style-type: none"> • The teacher may give feedbacks of the solutions proposed by the students and provide other possible solutions for students to consider;
E. Reflection – Evaluation of the task process
<ul style="list-style-type: none"> • The teacher and students evaluate the usage of the new concept and skills for translation practice;
<ul style="list-style-type: none"> • The teacher rethinks the entire task cycle and makes improvement for future classes;
<ul style="list-style-type: none"> • The students reflect on the execution of the task, the problems and solutions in the translation process.

Table 1: Task-based model of teaching computer-aided translation systems

Necessary preparation and guidance are highlighted in the pre-task and task stages to make up the students’ inadequate knowledge of CAT systems, particularly at the beginning of the course. Good preparation can facilitate the task cycle. The guided task is essential for the students to understand the abstract knowledge such as a concept or principle. For example, explanation of the definition is useful but hands-on experience of using translation memory will be much easier for the students to remember the concept.

The model is not totally in line with a student-centred approach. However, it does shift from a complete teacher-centred tradition towards a model with more teacher-student interactions and student initiative.

2.3. The achievement of the course objectives in the TBT stages

Compared with the traditional approach, the task-based model has several advantages in teaching CAT systems. First, it encourages students to engage more actively in the learning process. Some are eager to explore the complex functions of CAT systems after a couple of classes. Secondly, task-based teaching develops reflective thinking of students, which is very important for them to develop further skills in translation technology. The most important of all, it effectively develops the students’ competence of using CAT systems.

The course objectives can be achieved in the task-based teaching stages as summarized in the Table 2.

Course Objectives	TBT Stages in which the objective is accomplished
Understand the common terminology in translation technology	pre-task, task
Apply the main functions effectively in CAT systems	pre-task, task, feedbacks, discussion, reflection
Receive a grounding in the principles of project management in the translation workflow of agency	pre-task, task, reflection
Use self-study methods to acquire knowledge of a new CAT systems	task, feedbacks, discussion, reflection
Provide practical skills necessary to develop further skills in translation technology	task, feedbacks, discussion, reflection

Table 2: The course objectives achieved in different TBT stages

3. Some reflections

During the course, some problems are encountered related to training of CAT systems, including the selection of source texts and preparation of related resources, and selection of the CAT systems.

3.1. Selection of Source texts

The selection of source texts (in either English or Chinese) is always the top priority in the to-do list when the author makes preparation for course. Texts picked randomly may not show the usefulness of CAT functions and students may not fully understand the concepts and skills introduced in the course.

The following six factors of the source texts require considering:

- Textual repetitions – It is a known fact that CAT systems work best with source texts with has to contain some inter-textual and intra-textual repetitions.
- Terminology – This is especially important when teaching the concept “terminology management” as CAT systems provide rigorous consistency of terminology. The number of terms and their frequency also require some thinking so that students are able to manage their own terminology databases or perform term extraction, owing to the importance of terminology management in preparing translators to deal with terminology in their day-to-day work.
- Difficulty of translation – The author recommend using source texts at elementary and intermediate level (for most students enrolled in the course) so that the texts are not too difficult to understand and translate within the time limit in the class. As the course does not concentrate on translation techniques, but on how to use CAT systems, it is not recommended to select something involving a lot of thinking and revision such as classical literary works. However, it doesn't mean that the texts cannot be challenging. Difficult texts may provide a good practice for advanced users.
- Total word count – The texts have to be in the right length that most students manage to finish the translation in the time limit in the class.

- Authenticity – The author once created a text with a few simple sentences in a similar syntactical structure used at the beginning of the course but abandoned it soon. Even though it is useful in presenting the function of translation memory, it is tedious and students get bored easily. They prefer source text with meaningful content and closer to the real world. A possible explanation is that CAT systems are very practical in the real world. It seems that the authentic translation tasks can stimulate intrinsic motivation in students. A possible explanation is that the tasks fulfill the students' need for realism.
- Text format – In the beginning of the course, the text should be simple. Then its complexity can be increased by various elements such as tables, charts, and graphics when the students master the editing functions in the systems.

The six factors indicate that it is easier to prepare source texts on the basis of genuine translation assignments. According to author' experience, the excerpt from user manuals of IT products, financial statements and weather forecasts can be easily modified into a source text. In addition, the texts have to be altered in keeping with the main concept taught in each class. That is to say, when introducing the concepts and skills relating terminology management, the source text should have some important terms in different forms (one-word terms, multi-word terms and etc.) to be recorded in the user's terminology database.

3.2. Preparation of related resources

Apart from suitable source texts, related resources, including translation memory and terminology databases, parallel texts for alignment, are crucial due to the interactive nature of the editing environment of CAT systems where translators consult all the resources available. Related resources also require in preparation in accordance with the topic and skills involved in the class. For example, when preparing the translation memory (by manually aligning parallel texts), the variety of different similarity rate is essential so that students can identify the difference among matches (such as context match, 100% match and fuzzy match). For different resources, the important factors vary a lot. However, the overall preparation is less complicated than that for the selection of source text.

3.3. Selection of the CAT systems and their order in the training

The selection of the CAT systems taught in the course is a very interesting process. Factors to consider include:

- Concepts and skills introduced in the class – The most important one of all, the selected systems have to fulfill the need of finishing the tasks.
- Competence of the students in mastering the skills of the CAT systems – The selection of the CAT systems has to be in accordance with the students' understanding and mastery of the functions and skills of the CAT systems. Too much difficulty only frustrate the students.
- Popularity of the CAT systems – The students are usually very curious about the widely used CAT systems on the market. Thus the popular CAT systems such as SDL Trados, Wordfast, MemoQ (Proz, 2013) have a higher chance taught in the course.

- Work mode – An easy-to-use standalone system may fulfill the needs of students at the beginning of the course. However, when the collaborative translation is introduced, a server-based or cloud-based system with features like project management, and group-shared translation memory will be a more suitable selection.

Factors to consider also include the administrative factors such as budget provided by the University and hardware and software limitations such as hardware requirements and the operation system of the computers.

The order of CAT systems taught in the class is in line with the principle of the cumulative hierarchical learning process. When students master an easy-to-use system, a shift is made to a system with more comprehensive CAT tools.

4. Concluding remarks

The author thinks that the training of CAT systems in academic institutions should be conducted in a more systematic way. It is believed that the mastery of each simpler knowledge will become a good foundation for the mastery of the next more complex one, which is why a cumulative hierarchical learning process is discussed in the paper. At the practical level, a task-based teaching approach is proposed to organize learning activities carried out in each class, whereby the focus is more on students rather than the teacher. It is hoped that the course objectives can be achieved within the task-based teaching stages and the teaching pedagogy of CAT systems can be brought closer to the real world.

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