The New Information and Communication Technologies (ICTs) and Translation Competence

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Abstract: This paper is about translation competence and specifically the focus will be on one of the translation sub-competences: Instrumental sub-competence, which comprises the knowledge required to work as a professional translator, such as the use of sources of documentation and information technologies applied to translation. First, the different concepts on competence and more specifically on translation competence will be explored. Then, the focus will be on the Information and Communication Technologies (ICTs), both general and specific and their usefulness for the professional translator. Finally, some examples on the use of ICTs in our medical translation experience will be provided.

A translator is a person who expresses in a language (generally in his mother tongue and in writing) what is written in another language. The function of translators is far more important of what it is believed. Some wars have broken due to an error of the interpreter. More recently, people have died due to bad translations of medications. It is obvious then that translation is much more than just knowing two languages. There is something that distinguishes a bilingual person from a professional translator: translation competence.

Starting by Saint Jerome and his translation of the Bible to the Latin of the people (the Vulgate) in the 4th century, there have been very competent translators throughout history. The competence needed to translate has also evolved due to different factors, mainly technological factors.

Translators have always been associated with the image of a man writing or typing behind a heap of dictionaries and with a bunch of books behind him. However, in recent years this image has changed. Now when we think of a translator we can imagine a man behind a computer with Internet connection and maybe a couple of
books on his desk. Yes, with the arrival of the information era many things changed. The translation profession has also changed. Now, in order to be a competent translator it is necessary to be computer literate and to keep one’s information technologies skills updated.

First of all the term competence and then more specifically the term translation competence will be defined. Competence is the combination of skills, attitudes and behaviour that leads to an individual being able to perform a certain task to a given level.

Different authors have developed the term communicative competence: Chomsky 1957, Hymes 1967, Oliva 1998, Forgas 2003. Thus, the term competence has been applied to different areas of life: the labor market, business, education and translation.

Translation competence is a complex concept that has been addressed by a number of researchers in the field of Translation Studies. Yet, as stated by Ezpeleta (2005: 136):

> Reflection on the matter is a relatively recent development and results from empirical studies are still scarce. Some authors talk of translation abilities or skills (Lowe, 1987; Pym, 1992; Hatim and Mason, 1997) while others refer to translation performance (Wilss, 1989). The term competence - translational competence - was first used by Toury (1980, 1995), because of its similarity to Chomsky's (1965) famous distinction between linguistic competence and performance, to explore certain aspects of translation practice. Nord (1991) employs transfer competence and Chesterman (1997) called it translational competence.


We have found only four explicit definitions of translation competence, which are the following: Bell (1991: 43) defines translation competence as “the knowledge and skills the translator must possess in order to carry out a translation”; Hurtado Albir defines it
as “the ability of knowing how to translate” (1996: 48); Wilss says translation competence calls for “an interlingual supercompetence [...] based on a comprehensive knowledge of the respective SL and TL, including the text-pragmatic dimension, and consists of the ability to integrate the two monolingual competencies on a higher level” (1982: 58).

Finally, the fourth definition, and the one we adopt in this investigation, is that of PACTE research group (Process of the Acquisition of Translation Competence and Evaluation) (2000, 2003, 2005) as we think it is the more complete and coherent as it includes all the aptitudes and skills needed to translate. Their definition is the following:

Translation competence is the ability to carry out the transfer process from the comprehension of the source text to the reexpression of the target text, taking into account the purpose of the translation and the characteristics of the target-text readers”.

More specifically, they propose a model of translation competence that they consider to be the underlying system of knowledge that is required to be able to translate (2000: 100; 2001: 39; 2003: 126) and which has, they claim (2005: 610), four distinguishing features:

(1) It is expert knowledge and is not possessed by all bilinguals; (2) it is basically procedural (and not declarative) knowledge; (3) it is made up of various interrelated sub-competencies; (4) the strategic component is very important, as it is in all procedural knowledge.

In fact, the Translation Competence Model proposed by this research team (2003) is made up of 5 sub-competencies and psycho-physiological components (2005: 610-611) that overlap each other as they operate.
The bilingual sub-competence consists of the underlying systems of knowledge and skills that are needed for linguistic communication to take place in two languages. It is made up of comprehension and production competencies, and includes the following knowledge and skills: grammatical competence; textual competence (which consists in being proficient in combining linguistic forms to produce a written or oral text in different genres or text types); illocutionary competence (related to the functions of language); and socio-linguistic competence (concerned with appropriate production and comprehension in a range of socio-linguistic contexts that depend on factors such as the status of the participants, the purpose of the interaction, the norms or conventions at play in the interaction, and so forth).

The extra-linguistic sub-competence is made up of encyclopedic, thematic and bicultural knowledge.

The translation knowledge sub-competence is knowledge of the principles guiding translation, such as processes, methods, procedures, and so forth.
The instrumental sub-competence comprises the knowledge required to work as a professional translator, such as the use of sources of documentation and information technologies applied to translation.

The strategic sub-competence integrates all the others and is the most important, since it allows problems to be solved and ensures the efficiency of the process. It consists in the capacity to follow the transfer process from the source text to the production of the final target text, according to the purpose of the translation and the characteristics of the target audience (Hurtado, 2001: 395-397; PACTE, 2005: 611).

It intervenes by planning the process in relation to the translation project, evaluating the process and partial results obtained, activating the different sub-competencies and compensating for deficiencies, identifying translation problems and applying procedures to solve them.

The psycho-physiological components are cognitive and behavioral (memory, attention span, perseverance, critical mind, etc.) and psychomotor mechanisms.

There are other opinions about what translation competence comprises. Nord (1991) states:

… the essential competences required of a translator are: competence of text reception and analysis, research competence, transfer competence, competence of text production, competence of translation quality assessment, and, of course, linguistic and cultural competence both on the source and the target side.

Another description of the most important sub-competences is that proposed by Kelly (2005)

- Textual and communicative competence
- Cultural and intercultural competence
- Competence about the knowledge of the theme of the translation
- Professional and instrumental competence
- Interpersonal competence
- Competence related with the aptitudes necessary for a good composition and production of texts.
It is interesting that although the sub-competences mentioned by Kelly and PACTE differ in some ways, one is common: Instrumental competence.

In this investigation, we would like to deepen in the instrumental sub-competence.

As it has already been defined, the instrumental sub-competence is the knowledge required to work as a professional translator, such as the use of sources of documentation and information technologies applied to translation.

There is a wide range of information and communications technologies (ICT) available to translators today, including both general tools and specific tools. For the effects of this investigation ICT is defined as a group of information and communication technological applications, both general and specific, traditional or advanced that are especially useful for the professional translator. Among the general applications or tools, we have the Internet, the use of corpus linguistics and concordance generator programs as the most important ones. Among the specific ICT for the translator we have automatic translation (AT), and computer assisted translation (CAT) including translation memories.

**General ICTs for translators.**

1.1 **The Internet**

The services offered by the Internet provide the professional translator with considerable advantages in the documentation task as it allows him/her to access to a huge quantity of data and publications, as well as to communicate with experts and translators in other parts of the world with the purpose of exchanging ideas and experiences. In our opinion one of the most important tools offered by the Internet are the search and location information engines. At the current time, the three leading search engines are Google; Yahoo!, operated by Yahoo! Inc. of Sunnyvale, Calif.; and Microsoft's Bing (formerly Live Search), operated by Microsoft Corporation of Redmond, Wash. They allow to access in a few seconds to an enormous quantity of interrelated information. Further, the usefulness of these tools in our work as medical translator will be explained.

1.2 **The use of corpus linguistics**

This is another tool that can be of great help for the professional translator. Corpora are classified in two types. On one hand, the monolingual corpora, for example CREA
(Corpus de Referencia del Español Actual) of the Royal Spanish Academy. On the other hand, we have the bilingual corpora that can, in turn, be divided in parallel corpus and comparable corpus. The former is made up of a group of source texts and their respective translations. The best example of this is the Canadian Hansards. The latter are texts originally written in two or more languages.

1.3 Concordance generator programs

A third example of general ICT is the concordance generator programs, which can find all the times that a certain term appears in a text or in several texts written in electronic format. It can also show a list of the context in which the term appears.

Regarding specific ICT tools for the work of the professional translator, we have: machine translation and computer assisted translation.

Specific ICTs for translators.

1.1 Machine translation (MT)

Machine Translation is a procedure whereby a computer program analyzes a source text and produces a target text without further human intervention. In reality, however, machine translation typically does involve human intervention, in the form of pre-editing and post-editing.

1.2 Computer-assisted translation (CAT)

Computer-assisted translation (CAT), also called "computer-aided translation," "machine-aided human translation (MAHT)" and "interactive translation," is a form of translation wherein a human translator creates a target text with the assistance of a computer program. The machine supports a human translator.

Computer-assisted translation can include standard dictionary and grammar software. The term, however, normally refers to a range of specialized programs available to the translator, including translation-memory, terminology-management, concordance, and alignment programs.

Effective use of translation technology starts from the translator's point of view. The translator has to determine what types of translation technology are needed at what stages of the translation process in order to optimize his or her professional performance.
Within each of the three main phases of the translation process -- reception, transfer, and formulation -- different sub-competencies are demanded by translators, and the tools used to support them have to offer specific features and contents.

During the reception phase, a translator can use electronic encyclopedias, digital knowledge databases or information retrieval systems or can contact domain experts through online newsgroups or mailing lists in order to retrieve missing background knowledge, allowing him or her to combine text, domain, and world knowledge to fully understand the content of the source text.

The transfer phase, i.e. the adaptation of the source text information to the context of the target text culture is uniquely translational. Neither readers nor writers share this phase with the translator. It requires deep cross-cultural understanding and strong intercultural communication skills. The tools needed during this stage of the translation process need to offer a high degree of intercultural knowledge, while at the same time providing the translator with a comparative analysis of the cultures affected by the translation project. Resources in this field are still rare, and special kinds of translator dictionaries or culturally-sensitive terminology databases providing a thorough combination and networking of linguistic, encyclopedic and intercultural knowledge have to be designed to assist translators during the transfer phase.

Finally, the formulation phase confronts the translator with challenges regarding the production of the target language text. Here again, the use of dictionaries and terminology databases can assist the translator quite efficiently. The information contained in those resources needs to offer support especially with regard to the syntagmatic relations of terms, as can be found in many style guides or in collocation dictionaries. Dictionaries providing such information become valuable production dictionaries (see Kornelius 1995). In addition, the translator can turn to text archives available on CD-ROM or over the Internet for the verification of tentative translation solutions in the target language.

Now, we will provide some examples on how the use of ICTs has been of great importance for our translation work. Corsalud is the name of the journal of Ernesto Che Guevara Cardiology hospital, located in Santa Clara, Villa Clara. We work in the translation of summaries of articles from Spanish into English.

In this kind of translation, the formulation phase poses a greater challenge than the other two phases do. As the translator is translating into a foreign language, he/she should devote more time to the verification of terms and the syntagmatic relations of
those terms. In our experience, we have found that the search engine Goggle offers a great help in this sense.

Bellow two examples will be given. In one of the summaries to be translated into English, we find the following fragments:

1. *La coartación de la aorta abdominal es una afección vascular no hereditaria poco frecuente, que afecta a hombres y mujeres por igual. Recientemente ha sido nombrada como “Síndrome aórtico medio”, y los hallazgos clínicos son similares a los de la CoAo típica.*

   Tentative translation: Coarctation of the abdominal aorta is an uncommon, non-inherited vascular condition that affects men and women alike. It has been recently called "*middle aortic syndrome*", and the clinical findings are similar to those of typical Aortic Coarctation.

   In this first example, we find a neologism "*síndrome aórtico medio*". After some attempts based on medical dictionaries and other translation techniques and procedures, we have come to the tentative translation "*middle aortic syndrome*". Now it is time to prove if it is correct and if it is used in the specialized medical literature. A medical translator should know which the leading journals of each medical specialty are. In our case, we have a list of some of the leading cardiology journals in the world that are written in English. Then by using Google advanced search we type the tentative translation in quotation marks in the "with all the words" blank, followed by the name of the journal. Then in the results, we find many articles in which this term has been used in the specified cardiology journal. So, the tentative translation has been verified.

The second example is the following:

2. *El estudio gammagráfico con $^{99}$Tc-MIBI fue útil para demostrar la recanalización de la arteria relacionada con el infarto, tras la utilización de tratamiento trombolítico con Estreptoquinasa Recombinante Cubana.*

   Tentative translation: The 99Tc-MIBI gamma scan study was useful to demonstrate the recanalization of the infarct-related artery, after the administration of Cuban Recombinant Streptokinase therapy.
In this case, "recanalización de la arteria relacionada con el infarto" has been translated as “recanalization of the infarct-related artery”. Now after following the same procedures as explained above, the results showed that the sintagmatic relation of terms is correct because in the specialized medical literature in English it is used just like this.

**Conclusions**

With the arrival of the information era, the translation profession has changed. The new Information and Communication Technologies are very useful for the professional translator. There are general and specific ICTs for the translator. In our specific case, it has been found that the use of the search engine Google offers a great advantage in the verification of terms in their context and in the syntagmatic relation of terms. To sum up, in order to be a competent translator in our days it is necessary to make use of the new ICTs, mainly the general ICT tools.

**Bibliography**


