

Technical Translation as a Significant Communicational Bridge

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ABSTRACT

Technical translation is a type of specialized translation involving the translation of documents produced by technical writers (owner's manuals, user guides, etc.), or more specifically, texts which relate to technological subject areas or texts which deal with the practical application of scientific and technological information. While the presence of specialized terminology is a feature of technical texts, specialized terminology alone is not sufficient for classifying a text as "technical" since numerous disciplines and subjects which are not "technical" possess what can be regarded as specialized terminology. Technical translation covers the translation of many kinds of specialized texts and requires a high level of subject knowledge and mastery of the relevant terminology and writing conventions. As technology creates easier and faster means of communication and the world moves toward becoming a global community, the need to communicate with people from multiple language backgrounds also grows.

KEYWORDS: *technical, specifically, application, specialized, disciplines, multiple, terminology, mastery, relevant, communicate*

As a field, technical translation has been recognized, studied, and developed since the 1960s. Stemming from the field of translation studies, the field of technical translation traditionally emphasized much importance on the source language from which text is translated. However, over the years there has been a movement away from this traditional approach to a focus on the purpose of the translation and on the intended audience. This is perhaps because only 5–10% of items in a technical document are terminology, while the other 90–95% of the text is language, most likely in a natural style of the source language.^[2] Though technical translation is only one subset of the different types of professional translation, it is the largest subset as far as output is concerned. Currently, more than 90% of all professionally translated work is done by technical translators, highlighting the importance and significance of the field.

The importance of consistent terminology in technical translation, for example in patents, as well as the highly formulaic and repetitive nature of technical writing makes computer-assisted translation using translation memories and terminology databases especially appropriate. In his book *Technical Translation* Jody Byrne argues that technical translation is closely related to technical communication and that it can benefit from research in this and other areas such as usability and cognitive psychology.^[1]

In addition to making texts with technical jargon accessible for a wider ranging audience, technical translation also involves linguistic features of translating technological texts from one language to another.

Translation as a whole is a balance of art and science influenced by both theory and practice.^[1] Having knowledge of both the linguistic features as well as the aesthetic features of translation applies directly to the field of technical translation.

The role of the technical translator is to not only be a transmitter of information, but also to be a constructor of procedural discourse and knowledge through meaning, particularly because often, the technical translator may also take on the role of the technical writer.^[2] Research has demonstrated that technical communicators do, in fact, create new meaning as opposed to simply repackaging old information. This emphasizes the important role that technical translators play in making meaning, whether they are doing technical translation in one language or in multiple languages.

Much like professionals in the field of technical communication, the technical translator must have a cross-curricular and multifaceted background. In addition to grasping theoretical and linguistic orientations for the actual translation process, an understanding of other subjects, such as cognitive psychology, usability engineering, and technical communication, is necessary for a successful technical translator.^[2] Additionally, most technical translators work within a specialized field such as medical or legal technical translation, which highlights the importance of an interdisciplinary background. Finally, the technical translators should also become familiar with the field of professional translation through training.

Technical translation requires a solid knowledge base of technological skills, particularly if the translator chooses to utilize computer-assisted translation (CAT) or machine translation (MT). Though some technical translators complete all translation without the use of CAT or MT, this is often with pieces that require more creativity in the document. Documents dealing with mechanics or engineering that contain frequently translated phrases and concepts are often translated using CAT or MT.

Translators might read the document to understand what they will be translating, and determine the context of the text. In technical translation, the register and tone would then be determined based on the type of text and the context, although generally the tones of technical texts are neutral. The register can be very formal and scientific, or made to be easily understood by the general public.^[3] A translator might also need to use documentation techniques find resource materials as aids in order to translate the text.

Translators may bounce back and forth between steps, depending on their time constraints and their experience in translation. For instance they might revise at the same time as they are translating. A translator may also go through their reference materials and research depending on how familiar they are with the type of text.^[3] If they need to find the closest matches for clients, they may use translation memories or machine translation software. The translation process also depends on the laws and ethics codes put into place in certain regions, as well as any censorship, which might affect the outcome of the text.

Revision may depend on the translator's experience or nature of the text. In translation agencies, revisers may be hired to do the revising, but a freelancer may have to revise their own work. In the case of a pharmaceutical text, depending on the laws, it would require revision since the information in the source text could cause potential harm if mistranslated. There also may be certain style guides that the translation agencies may use that must be followed.

Although technical writing and technical translation may be similar in the content they work with, they are different as translators translate what the technical writers produce.^[4] The purpose of technical writing is to explain how to do something. Technical translating is similar; however it attempts to communicate how someone else explains how something is done. "The technical translator, like the technical writer, wants to produce a document that is clear and easy to understand". Translators may also consider controlled language and whether it applies in their target language culture.

While no machine translation device is able to replicate or replace the dynamics of a human translator, ^[5] machine translation certainly poses important advantages. In fact, there are many practical uses for and implications of machine translation for the field of technical translation. Machine translation has major cost advantages as compared to human translation. In fields of technical communication where information is constantly changing, for example, the stock market machine translation when paired with human interaction. In a mixed methods experiment, researchers first or jobs related to the weather, the cost of paying a human translator to constantly update information would become quite expensive. Additionally, situations that involve translating massive volumes of information over a short period of time, or situations that require speedy and frequent communication would benefit from machine translation. In such circumstances, a machine translator would be advantageous from a financial perspective.^[5]

Just as important as proper translation of linguistic qualities of languages is the subject of culture and how specific cultural features are transferred and communicated in the field of technical translation. In fact, a mutual understanding of cultural components is just as important as linguistic knowledge in technical translation.^[5] This highlights the complicated nature of working with technical translation. Various cultures can exhibit drastic differences in how communication occurs, even when both cultures are working with the same target language. One Canadian technical translator and consultant working with Russian colleagues detailed difficulties while working with both North American English and global English. Encountering discrepancies in rhetorical writing strategies, differentiation in tones, document formatting issues, and conflicting conceptual goals for engineering reports, the author emphasizes cultural practices, outside of the direct realm of linguistic forms, which can impede proper communication in technical translation.^[6]

In an example using a commonly translated document, the United Nation's Universal Declaration of Human Rights, a researcher used correlation analyses, including semantic network analysis and spatial modeling, to interpret data describing differences among seven different translated versions of the document. Demonstrating how culture plays an important role in the process of technical translation, the results of the study showed that while the translations were fairly similar, cultural subtleties and differences existed in each language's translated version. For example, across the seven languages, common words such as "people", "individual", "man", "nation", "law", "faith", and "family" had differing levels of importance in relation to other words in the language. While in Arabic the word "man" exhibited high levels of importance in the text, other languages placed higher levels of importance with words such as "person" or "individual". In another example, the English word for "entitle" and the Chinese word for "enjoy" carried connotations attached to the concept of "rights",^[7] demonstrating a linkage of concepts unique to each individual language. These slight differences demonstrate the culturally specific nuances that exist across languages. As with any type of non-MT, it is still a process completed by human beings, making it impossible for total objectivity.

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