

Explaining Some Fundamentals of Translation Technology

Zaki, Muhammad Zayyanu Ph.D

French Department, Faculty of Arts, Usmanu Danfodiyo University, Sokoto – Nigeria

<https://orcid.org/0000-0003-3785-2488>

Abstract: Modern translation requires translation technologies such as Computer-Aided Translation tools which eases the difficulties encountered by translators. The goal of CAT tools is to assist translators in increasing their productivity and improving the quality of their work. This article, highlights the need to have a foundation on which the translator undertakes a study of translation technology and its multiple approaches. Despite the advancement of technology, most translators are not yet familiar with the use of machines that support them to translate hence translators must have the knowledge of translation technology in order to achieve terminology management, consistency and speed in translating huge tasks. The research examined rigorously some fundamentals of Translation Technology by investigating and showing its genesis, definitions, concepts and classifications that support a translator to execute his task. The researcher applies descriptive approach and interpretative theory of translation. The research explored some fundamentals of translation technology that assist the translator in easing the task of the translation process. Finally, the researcher found out that there is an urgent need for translators to use modern technology, more especially translation technology that assist and facilitate the translation process. Some of these technologies include Computer-Assisted Translation tools, Terminology Management System, Translation Memory and Neural Machine Translation (which uses Artificial Intelligence) that is currently the best machine translation.

Keywords: Translation Technology, Computer-Assisted Translation, Machine Translation, Statistical Machine Translation and Neural Machine Translation.

Abbreviations

AI	- Artificial Intelligence	HMT	- Hybrid Machine Translation
ANN	- Artificial Neural Network	HTML	- Hypertext Mark-up Language
CAHT	- Computer-Assisted Human Translation	IBM	- International Business Machine
CAT	- Computer-Assisted Translation	IT	- Information Technology
DNN	- Deep Neural Networks	MAHT	- Machine-Assisted Human Translation
FAHQT	- Fully Automated High-Quality Translation	ML	- Machine Learning
GMS	- Globalisation Management System	MT	- Machine Translation
GT	- Google Translate	NLP	- Natural Language Processing
HACT	- Human Assisted Machine Translation	NN	- Neural Network
HAMT	- Human-Assisted Machine Translation	NNS	- Neural Networks
		NMT	- Neural Machine Translation
		PDA	- Personal Digital Assistant

RBMT	-Rule-Based Machine Translation
SL	- Source Language
TL	- Target Language
TM	- Translation Memory
TMS	- Terminology Management Systems
TT	- Target Text

1. INTRODUCTION

The computer has long been a necessary component of the infrastructure required by translators, but the amount of knowledge and expertise a translator must acquire to be able to use it is expanding daily. The recurrent expansion in the quantity of computers and operators, the volume and diversity of electronic file formats and the speed at which they move through the internet all contribute to translation technology. A large part was also played by the “computerisation” of institutions, organisations, personal businesses and professional work settings as well as the digitisation of content created.

Leaders in the use of the computer as a tool that is fully integrated into the professional process include translators and teachers of translation. Although the creation of MT software cemented the connection between translation and computers. A set of instructions required to perform actions for a certain task makes up a piece of software. These programmes are made up of detailed instructions that show the computer how to perform specific tasks, Gupta, (208). These programmes “enable users to perform specific information-processing activities” Bocji et al (125).

The real boom in translation technologies began with the creation of electronic dictionaries and terminology databases, the introduction of the internet with its vast array of opportunities for research, documentation, and communication as well as Computer Assisted Translation (CAT) tools, Alcina (6). A significant new multidisciplinary area of research, translation technologies sits in between computer science and translation. According to Alcina (12), Its success in the workplace will largely depend on its academic performance and the successful integration of translation technologies into the training programs for translators, Alcina (12). Translators, therefore, need to understand the computer tools and adopt the systems in addition to their translation experiences to improve their relevance in the field.

The relevance of the integration of a computer in the translation process or simply “digitisation” cannot be overemphasised. Technology these days cannot be avoided in all facets of our

lives, particularly translation technology. The use of Microsoft Word to type the final draft of the translated text, the use of the internet to send and receive a translated copy, the application of MT in the translation process, the use of glossaries, encyclopedias, TMS and CAT tools are all part of the translation technology that a translator cannot avoid. Therefore, translators need to acquire and adapt the use of translation technology like other professional fields as infact “by making mistakes, we learn” and “practice makes perfect”.

The fear of using a computer or losing a job makes it pertinent for professional translators to adopt the use of translation technology. A lot of translators in Nigeria misunderstood the concept of digitalisation in translation. It is against this background that the researcher finds it necessary to explore the field of translation technology, its use, applications, divisions and scope for easy understanding to translators and the role they play in a translation process. These translation technologies need to be brought to the limelight for better explanation and understanding.

1.1 Translation – The Basics

Translating meaning rather than words is the primary tenet of translation. This is because languages differ not just in terms of vocabulary but also in terms of grammar, word order and occasionally even words that have no equivalent in other languages. The translation process is intricate and is composed of numerous subprocesses and duties of various kinds. This new topic of study was created in response to the necessity to combine professional translators' extensive experience with computer processes and tools for translation. Translation technology, is therefore, the use of computer tools that can augment the efficiency, speed and quality of translation projects.

It is difficult to translate these days without the use of technology in one way or the other. It can be translator assisting machine or machine assisting translator. When a translator assists a machine it is referred to as Human Assisted Machine Translation (HAMT) but when a machine assists a translator it is referred to as Machine Assisted Human Translation (MAHT). Translation without any kind of automation is purely called Human Translation. There is also Fully Automated High-Quality Translation (FAHQQT) that is achieved without any kind of human intervention.

The classification of translation technology can be in two categories based on their mode of operation. It can be online-based translation or offline-based translation. It is online-based when a translator uses online resource tools like data capture tools, corpus analysis tools, MT, TMS, localisation tools and diagnostic tools to translate a text. While it is offline-based

when a translator uses computer tools like word processors, grammar checkers, dictionaries, encyclopedia and electronic resources to translate a text. Additionally, Hausser (34), notes that “translation offers the enabling condition that a coherent source text is given in advance, in contrast to automatic language generation, which must deal with the issues of “what to say?” and “how to say it?” a specific ST can be used to avoid the challenging issues of interpretations of language in independent modeling of understanding as well as production (the selection of content, serialisation and lexical selection) to automatically translate sizable amounts of non-literary texts, typically into several languages at once.

Also, Alcina (18) tries to distinguish between tools and resources for a better understanding by translators. “Tools” on one hand, refer to computer programmes that give translators the ability to complete some tasks with a piece of data that they have prepared while simultaneously allowing a specific type of translation output to be generated. These tools, which are used to store the terminology translation process, include Microsoft Word, translation software, and terminology database management software. On the other hand, “resources” are a collection of data that is organized in a specific way and that may be looked up or used during some stages of processing the translation assignment. Examples of these resources includes dictionaries, corpora and encyclopedia.

1.2 Translation, Digitalisation and Globalisation

As translation is changing phase so also a professional translator. The act of translation may have saved time but it did not save on distance, Conin, (8). This is particularly in the area of Information Technology (IT); translation professionals and companies are beginning to feel the need to fill new sorts of positions within their organisations. They must make development investments and test a variety of tools and some businesses are even creating their own. It is increasingly clear that the translation industry will experience significant transformation in the next decade.

Also, digitalisation, in translation, is the modification of a system, a process, to be run using computers and the internet. Digitalisation is the transition from normal translation to a digital translation with the use of digital translation technologies. The inclusion of new technology, such as translation tools into the work process significantly lowered the danger of potential translation errors. Quality assurance is still one of the top goals in the translation sector. Translation tools make it possible to build content databases and glossaries with pertinent terms that support translators while also allowing for the timely detection and correction of errors, Prezi (202). Digitalisation has many benefits, including large storage capacities, accessibility, versatility (can be created once, and

used for many things), diversity, manipulability, interactivity and hypertextuality (or nonlinearity) for texts and images. There are some features of translation software tools. The tools’ quality attributes functionality, dependability, usability, efficiency, maintainability, and portability.

Besides, anything that conveys individuals, cultures and economies of many countries closer together is referred to as globalisation. In the field of business, “globalisation” refers to strategies used to strengthen relationships between businesses and their clients globally. As Bielsa (205) claims the overcoming of cultural and linguistic barriers and the emergence of spatial barricades and the centrality of information and data. The number of encounters between different translators and cultures has expanded as a result of globalisation. Venuti (106) argues by drawing attention to the material conditions of concepts, their linguistic and discursive forms, and the various interpretations and uses they acquire in various cultural contexts, translation exposes a fundamental idealism in philosophy.

The demand for mediators and interpreters has expanded as a result of these cross-cultural encounters, which is encouraging for the translation industry as a whole. Cultural, linguistic and geographic barriers play a significant role in deteriorating relationships as a result of industrial and technological advancements and growing globalisation. Bielsa further explains that “globalisation is generally connected with the shrinking of our world and the possibility of instant communication across the globe” (16). Thus, employing translators not only expands the investing markets but also ensures that there is a seamless relationship.

1.3 An Overview of Translation Technology

The antiquity of translation technology can be drawn to the 9th century when Al-Kindi developed the method of frequency analysis that is in use up to date. The evolution started in the 1950s with the introduction of the first Machine Translation (MT) system by International Business Machine (IBM), then, the introduction of speech recognition technologies (voice-to-text) by the United States Department of Defence and Advanced Research Project (DARPA) in the 1970s. The arrival of electronic dictionaries, terminological databases and modern Translation Management Systems (TMS) in the 1980s made translation more accessible by providing translators with instant access to information. In the 1990s CAT tools were introduced for translators to work more efficiently and effectively as this technology transformed translation forever. Also, the introduction of Statistical Machine Translation (SMT) was made in the 1990s by IBM which translates one language into another by comparing a large number of parallel texts in both languages.

Translation technology began to take shape when computers became available and affordable in the mid-20th century. Google Translate was launched by Google in early 2006 but the system resulted in poor grammatical accuracy as it used predictive algorithms through guessing. It continued until Google introduced Neural Machine Translation (NMT) technology in the same year with improved technologies linking with Artificial Intelligence (AI) for best results.

The field of translation is divided into two branches: pure and applied. By applying, translation technology falls under the category that includes translator teaching and training, translation policy, CAT tools, MT systems, linguistic tools, Document Management Tools (DMT) and project management. Translation technology is the design and adaption of techniques, instruments, and technical resources that simplify the work of translators and promote teaching, training, and research activities the focus of a new field of study, Alcina, (17). Translation technology, therefore, is the most recent area of study in translation studies. Modern translation technology can be utilised on a variety of platforms, together with smartphones, computers, tablets and other mobile devices, and they reduce the time needed to perform research and speed up the process of identifying words. Research is done during the translation process to make sure the translation is generated in the appropriate context.

There are two main objectives of natural language processing (NLP), which is concerned with how computers handle and comprehend human languages. The first step is to make it possible for people to communicate with computers using human languages. The second is to create language application technologies that necessitate strong linguistic and human language skills, Kwong, (563). This paves the way for a machine to understand human languages and their patterns in order to translate them to another language using their patterns. This is referred to as Machine Learning (ML). Due to ML, translation systems are already a lot more erudite than they were even a few years ago. The power of translation technology will only rise as AI is developed. However, because both human translators and specialised MT systems have benefits that complement one another, translation will never be entirely mechanised. A perfect distinction is made here; AI is perfect for automating repetitive activities whereas human translators excel at coming up with novel ideas. The integration of the two technologies made it a more sophisticated translation machine with the use of neurons that mimic the human brain.

Nowadays, many diversified businesses use translation technology as a form of translation service. The desire for smooth, user-friendly and accessible experiences among consumers in today's globalised environment makes it crucial. In addition, users demand high-quality, culturally sensitive and

requirement-specific machines. By helping professionals to expedite the entire localisation process, translation technology enables businesses to go global fast, easy and affordable. Translation technology offers professional translators scalable, effective solutions that make it possible for translators to access new markets more quickly and successfully than before.

As a result of translation technology, translation experts concur that to achieve the greatest outcomes, MT determined by AI is joint with human intelligence. In the end, a team of human and AI translators will collaborate, with each member contributing in their unique way. Translators will probably switch from Computer-Assisted Human Translation (CAHT) to Human-Assisted Computer Translation (HACT).

The research was conducted on translation technologies as Handayani et al present the most contemporary technologies in translation studies. The technology is made available through internet access to help them complete their translation projects. These two technological advancements: CAT tools and MT – provide the most frequent support. There are numerous alternatives from these two technologies that can be used to facilitate and streamline translation tasks, CAT tools: Trados, Wordfast and DéjàVu and the two tiers of paid and unpaid CAT tools. However, human collaboration continues to have a significant impact on the enhancement of their quality. Therefore, human translation should be aware of how to employ these two cutting-edge technologies. Youss et al (218) add that intercultural technical communication demands more from translators than merely linguistic, cultural and textual proficiency in an era where technological advancement is constant. They need to be adept at using translation technology, which can be of great assistance during the translation process. The study covered a few features of translation technologies and how capable translators should handle the machines.

1.4 Division of Translation Technology

The translation technology is divided into two with other sub-divisions as this may consider the machine as well as human involvement in the translation process. There is MT which has sub-divisions that include Audio-visual Translation (AVT), SMT, NMT and CAT tools which have other sub-divisions such as TMS, TM and Terminology Management.

1.4.1 Machine Translation

Machine Translation has a recognised acronym (MT). According to Sin-Wai, the fundamental difference between MT and terms like Machine-Assisted Human Translation (MAHT), Human Assisted Machine Translation (HAMT) and CAT tools is that MT automates the entire translation process. MT is a programme or piece of software that carries out all translation tasks from one language to another automatically and without

the assistance of a human translator. MT is derived from the intersection between NLP and ML, as a computer, it is trained to understand human language. For accurate Mt translation in NLP, there are word embeddings that include thousands of pieces of information and the machine needs millions of words to truly learn the embeddings, Alcina (10).

MT is a form of Computational Linguistics and Language Engineering that directs software to translate text or speech from one language to another. The two most known engines are Ruled-Based Machine Translation (RBMT) and SMT. These systems are different in the way they process language content. They are frequently joined within the identical system known as Hybrid Machine Translation (HMT), Zaki et al, (34).

In the MT translation process, the source text is electronically uploaded or pasted into the machine, processed and then analysed by comparing millions of potential files on the internet before the translation is finished without any human involvement. MT translates the SL into English before translating English back into the TL, it “provides mobility across many platforms and operating systems being able to run on solitary workstations, servers and browsers” as stated by Sin-Wai, (224). The author enlightens that MT performs sentential translation, which is translation sentence by sentence (37); in contrast to CAT tools technologies which do a segmental translation. Sin-Wai, (37) explains that MT is viewed as pre-translation on two counts. The former involves preliminary work on the texts to be translated, checking the spelling, assembling dictionaries and regulating the text formats. The latter is taken to be a draft translation of the original text, which can be additionally reviewed by a professional human translator.

Furthermore, online translation concentrates on the connection between translators and the web. It grants a variety of web-based resources for professional translators with online (meta) dictionaries, glossaries, terminology databases and shared translation memories highlighting their key features, Gaspari, (578). The application of online translation tools and internet-based translation environments such as web-based applications support translation projects from start to finish. It allows the deployment of proprietary translation memories as well as the incorporation of online MT for following post-editing to improve efficiency.

1.4.1.1 Statistical Machine Translation (SMT)

NLP gets beyond linguistic hurdles via automatic translation, but it still cannot capture the meaning of idioms. Two factors that have evolved the translator’s capacity to fulfil his task on time are accuracy and time. According to Douglas (29), just as computers can do calculations in seconds that take

human hours, days or weeks to do, so too would the ideal translation machine translate a text that took five translators two weeks to write in minutes. To produce automatic translations, MT uses millions of manually translated texts. It is one of the most often utilised free translation services is Google Translate (GT), which can be accessed at www.translate.google.com.

For Douglas (38), MT is an “online SMT system whose reliability has improved to the extent that some translators, in some language pairings, find it cost-effective to create the first draft with GT and then refine it into a professional form”. MT can translate files into many other languages, making it the most potent Personal Digital Assistant (PDA) in the world.

Douglas (33) further adds that “MT systems, which offer clients huge speed advantages at a fraction of the expense of human translation, are usually and correctly, opposed by translators”. They are accustomed to the machine system environment that helps translators do their work on schedule. A translator is a necessary human intermediary who is needed after the procedure is complete. As a result, the insertion of Source Text (ST) and Target Text (TT) into an automatic operation using natural language to software that serves as a transitional between text inputs is referred to as MT.

It was, therefore, possible to examine and analyse the texts using software to look into the usage and patterns of the word forms they included because they had been composed for actual communicative contexts rather than ones that the language researcher had created, Douglas, (291). To create and carry out tasks independently, machine software imitates human behaviour. This makes it simple to discern between two languages, evaluate their grammatical construction, parsing and structures and translate between them.

1.4.1.2 Neural Machine Translation (NMT)

Deep Neural Machine Translation (DNMT) and Neural MT are other names for Neural Machine Translation (NMT). The MT approach applies Neural Network (NN) techniques to estimate the possibility of a sequence of words, placing this translation tool at the height of its development. This could be a single word, a whole sentence, or even an entire page according to modern technology. Deep Neural Networks (DNN) and AI are used in the revolutionary language translation and localisation method known as NMT to create neural models. NMT generates substantially higher-quality translation than SMT approaches, with greater fluidity and adequacy and has rapidly become the dominant techniques to MT, with a large shift from SMT to NMT.

The reason is that the computer is “taught” by human translators to perform better. The machine can now translate accurately

and learn a language, much like the human brain can (using NNs), which leads to a continuous improvement in the quality of the translated material. NMT, which stands for “improved Machine Translation”, can address issues including direct translation between languages. The neural translation model is capable executing task from beginning to end to maximise translation performance, unlike conservative translation SMT systems.

NMT, according to Kohen, (12) aims at developing and training a single, large NN that analyses a sentence and provides an exact translation, as opposed to the conventional phrase-based translation system, which is made up of many little sub-components that are adjusted distinctly. The NMT is a technique built on synthetic NNs. Thanks to recent significant advancements achieved by AI; it is now a viable foundation for some professional translations. The NMT method of MT predicts the possibility of a word sequence using an artificial Neural Network (ANN), generally modeling full sentences in a single integrated model.

Using NNs, which are capable of proceeding with enormous datasets with little guidance, NMT transforms source text into target text. The two main components of an NMT system are an encoder network and a decoder network. With NMT millions of data points can be translated in real-time with dependability and accuracy that are currently comparable to those of humans.

Huge ANNs are used by the NMT system to transmit and receive data globally in a matter of seconds. Internet NNs function similarly to human neurons which communicate with the brain by sending and receiving messages to increase translation quality by leveraging a wide context to locate the most suitable translations. NMT saves millions of translated texts from multiple MT databases that are built by translators. The output is then modified and rearranged per the human language grammar approach to identify commonalities across various languages using linguistic and psychological insights. NMT is already applying system learning architecture in more than a hundred languages worldwide.

1.4.2 Computer-Assisted Translation Tools

CAT is an acronym for Computer-Assisted/Aided Translation; it is not the animal that most people would imagine. It is a web-based tool that helps translators do their translations with ease. In the translation process, translators can engage CAT tools software at any point in their task. The use of CAT tools technology, which is meant to support translators rather than replace them, has been expanded to nearly all types of translation work. Human translators are in control of

translating, editing and proofreading on the CAT tools platform. The purpose of CAT tools technology is to assist translators in working more productively and producing high-quality translations and not to substitute human translator’s job. Sin-Wai (39) elucidates that translation technology must be used by translators. It is used by human translators for a multitude of tasks.

Also Krings (15) and Quach (130) explain that CAT source texts are translated in the process by translators, who are aided by functions that can improve the speed and accuracy of the translation. The most well-known feature for increasing the effectiveness of the translation process is the use of terminology and TM (databases containing texts in different languages) to help translators save and reuse terminology efficiently. Ant CAT tools interface contains a window-based soft with instant start, glossary and fuzzy matches in addition to machine translation, dictionary, multiple translations options, notes and segment properties.

1.4.2.1 Translation Memory (TM)

A database of matched text segments called Translation Memory (TM) contains segment B as the translation of segment A. TMs are used by translators to keep track of previous translations' content. Melby, et al (662) in addition, specify that it refers to a database that contains a collection of text limitations in the associated source language and target language, arranged in a recognizable pattern. One of the software tools for creating, storing, accessing, retrieving, and processing the units found in the Terminology Management database is TM.

For Chollet, (205), TM systems can be thought of as adaptable databases for enhancing the translation process and accelerating tasks involving repetitive text. They aid a human translator in the translation process but do not translate a document. In handling large translation projects, where consistency is crucial, TMSs are especially helpful, Gambier et al (209). One of the important features of the translation of specialised text is consistent in translating a phrase using a precise equivalent, and these technologies offer major time savings and actual help in this area.

1.4.2.2 Terminology Management

The science of terminology is the study of the composition, evolution, application, and control of terminologies in translation. As a result, controlling terminologies, which are words and idioms with specific meanings, involves comprehending them, Kara, (644).

1.4.2.3 Terminology Management System (TMS)

A sort of software called a Terminology Management System (TMS), formerly known as a Globalization Management System (GMS), is used to automate numerous steps in the human language translation process and increase translator productivity. Periz (22) describes it as a system made to control the localisation and translation of linguistic resources. It also goes by the name Translation Management Software, and it is quite helpful for managing translated assets on a large scale.

TMS is a software platform created specifically for managing translation projects at scale. From the first content upload through the final reformatting of the finished translations, the platforms establish a pipeline. TMS enables translators or translation agencies to maintain control over the growing volumes of content they must process. According to Shuttleworth (678), it is made to make it easier to oversee the business, procedural, and linguistic aspects of their translation and localization initiatives. It enables translators to operate more skillfully, concentrate on the requirements of their job, and make the necessary decisions.

Four main functions made up of TMS, "term extraction, storage and management, search, retrieval and insertion; term checking" are a few that could be combined in an application. Drugan (199). Target language (TL) support and the ability to get them from the database and incorporate them into a translation are features that set TMSs apart from other CAT solutions.

1.4.2.4 Website Localisation

It makes use of technical resources like computers, web browsers, and language translation to accommodate other users who speak various languages. Website localization fits within the umbrella of translation technology in this manner. According to Singh (7) website localisation is the modification of websites to conform to the "linguistic, cultural, technical, functional, legal and other locale-specific requirements of the target market".

Localisers are expected to be knowledgeable about a variety of technical aspects of the language used on the web as well as the layout of web pages to adapt the content of a website. The basic language of the web is comprised of these two elements and a few related ones as Hypertext Markup Language (HTML). HTML is a collection of embedded instructions that regulate how information is presented by web browsers and how browsers respond to specific events, Bott et al, (20).

Website localisation is similar to software localisation in this regard because both source code and user interface are distinguished, in addition to translatable and non-translatable strings. The user interface is what users see, hear, and experience when they access a webpage; it may in some way reflect the browser's interpretation of source code tags. Source code is a file where all of the HTML tags may be located.

1.5 Cultural Interchange

Translation is a complex activity involving many linguistic, social and cultural elements. It is a means of exchanging cultural traditions, norms and ethos among different societies and languages. The need for translation has become pertinent, especially in this modern era where the world is now a global village through digitalisation. Translation and culture are inseparable. Translation is the process of replacing a representation of a text in one language with a representation of a text in a different language that has the same meaning. The realia of translation is structured around the notion of equivalence which is the goal of translation. The research showed that translation is creativity. It portrays the practical possibility of translating linguistic and metalinguistic elements considering the cultural equivalence gap between two languages and two cultures (for example, English and French).

The cultural interchange has two facets. One is the idea of introducing and disseminating one's own culture to other countries to gain their awareness of that country's way of thinking, way of life and artistic expression. As Youss et al. (1) observe intercultural technical communication is a tremendously useful tool in translation technology. They are tools of computer applications designed to support technical content from one language to another. With these technological tools, when switching between languages, it is obvious that different languages have different syntactic and morphological elements that must be considered. In a similar vein, different cultures have different value systems that translators or localizers need to be aware of and effectively utilize to increase the odds that their translation will be successful.

1.6 Recommendations

When it comes to the fundamentals of translation technology, there are several key recommendations to consider, whether you are an individual user or an organization looking to implement translation tools effectively:

- Before using translation technology, take the time to understand how it works. Familiarise yourself with the basic principles of MT, including the use of neural networks and algorithms.

- Select a translation tool or platform that aligns with your specific needs. Consider factors like language pairs, accuracy, speed, and integration capabilities with other software.
- Know that translation technology has limitations. It may struggle with idiomatic expressions, cultural nuances, and context-specific content. Be prepared to edit and review translations for accuracy and clarity.
- Ensure that the translation tool you choose prioritizes data privacy and security. Understand how user data is handled and stored.
- Look for tools that allow you to customize translations to suit your specific needs. Some platforms enable you to create translation glossaries and rules to improve accuracy in specialized domains.
- Incorporate human oversight into the translation process, especially for critical or sensitive content. Professional translators can provide context and ensure accurate translations.
- Plan for post-editing of machine-generated translations. Even the best machine translation may require human review and editing to meet quality standards.
- Be aware of ethical considerations when using translation technology. Avoid using it to spread misinformation, and be cautious about issues related to cultural sensitivity and bias in translations.
- Integrate translation technology seamlessly into your workflow if you are an organization. Ensure it works well with other software and tools you use.
- Implement quality control measures to ensure consistency and accuracy in translations, especially in large-scale translation projects.

By following these fundamental recommendations, you can make the most of translation technology while mitigating

potential pitfalls and ensuring that your translations are accurate and contextually appropriate.

CONCLUSION

Computerisation has become part of professional translators' activities, as every translator uses system of tools. Nowadays, translation cannot be achieved without using translation technology in one way or the other. Chan (258) adds that "translation technologies as a branch of translation studies specialised in the issues of skills related to the computerisation of translation". A translator must use dictionaries, encyclopedias, translation terminologies management, machine translation and online tools or resources. The result of the translation process is translation technology that eases the task of a translator in bringing about the digitalisation of translated documents for translation databases, localisation of translation applications and sophisticated CAT tools and NMT. The fast rate at which translation technologies are moving and the translation tools that assist translators in producing high-quality translations and a high number of available translation memories has resulted in the digitalisation of translation.

The field of translation technology has seen significant advancements and transformations in recent years. Several fundamental aspects have shaped the landscape of translation technology, and it's important to recognize their impact: MT systems, CAT tools, NLP and AI, localisation, quality assurance, Human-Machine collaboration, customisation and adaptation, big data and corpora training, ethical consideration and continuous evolution. Translation technology has become an indispensable part of our globalized world, facilitating communication across languages and cultures. While it offers remarkable efficiency and convenience, it is essential to use it responsibly and in conjunction with human expertise to ensure accurate and culturally sensitive translations. The field is likely to continue evolving, bringing even more exciting developments and challenges in the future.

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