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## The effects of technology on translation students in academic translation teaching

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### Abstract

This paper aims at touching upon effects of technological developments on the translation teaching in the 21st century. These technological developments are usually in the area of Information Technology (IT) contributing to the fast growth of the computer industry. The popularization of the computer, especially in the early 1980s changed actually the way translator follows in the translation process through the appearance of useful translator tools including translation memories, terminology databases, translation management programs, electronic corpora and so forth. These breakthroughs happening in the computer technologies also triggered a different perception of what we call functional translation theories defending that every translation is made for a purpose and suggesting a target oriented approach. In the past a translator had to translate using a typewriter or paper and pen. The development of the technology, however, encouraged the translation industry or more appropriately, now localization industry to adopt new tools in the translation process. While explaining all these points, the study follows a descriptive and comparative methodology.

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### 1. Introduction

Dating back to 1980s, an American company Microsoft developed software programs for the North America and requested from a team of translators to do their translations only from English into such prominent languages as

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German, French and Spanish. It can therefore be said that those years witnessed limited translation activities among popular languages and the translation volume was on a low scale. As this was the case, the release of products had no serious delays. However, as the markets expanded more and more, conditions reversed (Pym, 2010:121). Through radical technological changes in the society, the digital content and components of a product had now to be translated or perhaps a new term, localized into many languages rapidly and simultaneously (simship) so as to access to all the regions in the world. The simship of products was so important to a company which targeted international markets that any delays in the translation process were intolerable. Such an unexpected situation meant also a financial loss for the company commercializing and distributing the product.

In 1980s, computer prices fell, increasing nevertheless the number of home users in most of the locations. In other words, computers once produced for professionals or academics were now targeted at ordinary people who had no background knowledge of computer technology, computer softwares and hardwares, computer programming and engineering. In parallel with this development, USA centered computer companies performed their first investmens. Sun Microsystems initiated its activities in Europe in 1983 and expanded into Asia and Australia in 1986. Microsoft had already started taking initiatives on international markets. For example, it opened its overseas sale office in Tokio in Novemver, 1978 and expanded into European Market (Esselink, 2006: 22). Such developments arising from the development of the computer technology also triggered a high amount of localization<sup>1</sup> of materials mostly regarding the newest products. As computers were popularized among ordinary users apart from the academic and bussiness circles, functionality and features of the latest products required changes as well. That is to say, especially desktop computer users needed softwares to deal with their work more effectively. The translations of softwares were hence started to be done in a way corresponding to the local standards and languages of a target audience. Due to these changes, software and hardware developers started taking initiatives on an international level, which contributed to the popularization of a new term localization instead of translation (Esselink, 2006: 22).

By thoroughly examining the digital age presenting us these innovations and radical changes which stem from computer and information technology, one can see that tools used by translators are now not the same as those of old times since translators left paper and pen and gave up using a typewriter with the introduction of high tech computers, electronic documents and useful tools which will be explained in detail throughout the paper. Translators can only comprehend how these tools are used in the translation process with a good education, or before they finalize their training, they can at least be accustomed to such user friendly tools. Therefore, the objective of the study is to focus on academic translation teaching now accompanied by the translation technology and in parallel the teaching of the related tools for productive and fast created texts targeting the localization market. In doing so, how breakthroughs happening as a result of technological developments have affected the perception of what we call functional translation theories constituting a long term paradigm of translation studies is first to be explained within the main framework of the study, explicitly the effects of the technology on translation students.<sup>2</sup>

## **2. The effects of technology on translation 2 students in the academic translation teaching in the context of theoretical approaches and real life situations**

As emphasized before, the integration of the technology into the translation teaching has changed the way translator follows during the translation process, which as result influenced the skills expected of them. With the arrival of CAT tools such as translation memories, electronic corpora, terminology databases, translation managment systems or Internet based applications like *Nubuto*, translators have hugely started benefiting from these resources even before they finalize the translating process, so have the translation students. The popularization of these products on the market goes on stubbornly. It should be remembered at this point that technological developments and the birth of such user friendly tools accordingly have freed translators to know everything about

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<sup>1</sup> Localization means the process of customization or adaptation a product in favour of a target culture and language. It also implies as defined by LISA, “taking a product and making it linguistically and culturally appropriate for the target locale (country/region/language) where it will be used and sold” (qtd. Esselink, 2000:3). It deals with the localization of softwares, web sites and even games.

<sup>2</sup> The study is done using a descriptive and comparative approach.

everything by offering new ways of doing translations. These new ways that are different from models of the traditional translation have also facilitated what translators do since they have accelerated the translation process and increased productivity as well as developing teamwork skills (See Pym, 2012). Therefore, it can be suggested that teaching of them must increasingly be available in translation courses and besides their inclusion in a translation curriculum must be supported by academics to be able to create a future oriented effective translation for needs driven market or to introduce “student oriented” localization models combining theory and practice (see Austermuhl, Pym, Brunette, Esselink). Unfortunately, the pioneer translators specialized at these tools had often no such a chance to learn them interactively in the classroom unlike a new generation. Instead, they had to face them mostly by trial and error, without even receiving a proper education which combines theory and practice. As Esselink claims in his book entitled *A Practical Guide to Localization*, it was impossible for a company to hire translators with computer or localization skills in the past (2000:9). Today this is, however, not the case. Required skills of translators have dramatically changed with an increasing amount of the integration of the technology into the academic translation teaching. Translators in previous times acted as only translators, so their developed skills were in that way. However, the technology has loaded them with new competitive skills and their roles started to be determined by new tasks or chores such as computer programming, computer engineering, project managing, localization engineering, and so forth. All these can properly be taught with the introduction of multi-componential courses for would-be translators, or translation students can at least be set free to choose elective courses from other departments which are mostly associated with the use of the technology. In parallel with this, Austermuhl states that localization, like a traditional translation, requires a translation of the text, terminology research, management or revision but it also says more than translation because it also includes software development and engineering, desktop publishing or edition of graphic files (2006:69). Then, the integration of the technology into the translation teaching is necessary for would-be translators at least to have an understanding of the computer structure or issues regarding the computer technology<sup>3</sup>.

With the integration of the technology into the translation teaching and translation studies, translators have started knowing and understanding how they can separate translatable parts of a text from untranslatable ones in software programs in order to avoid erroneous translations which can delay the release of the product. Information mining or having knowledge of the entire subject matter in the digital age is not as important as acquiring or understanding the skills/tasks mentioned above because the former can now be provided by translation memories (TM systems) or other CAT tools for translators or translation students. At this point, it would be appropriate to mention that one task or skill which should be certainly taught at translation programs of universities is the localization engineering (see footnote in the first page for the definition of localization) because it is one of the steps mostly directly related to the translation process. Localization engineering, as defined by Esselink, “locates and identifies all translatable files and prepares them for translation” (2002:2). Though the localization engineering is generally performed by non-translators, they must also be done by translators to catch up with the cut throat technological developments in order not to be unemployed. This new role, as well as others can be gained or at least rehearsed for would-be translators with the integration of a technology friend course to the academic translation teaching. In that way, translation students can be prepared for real life situations including an extensive localization workflow system which is a bit different from the traditional cooperation model developed by Manttari, a defender of a functional approach to the translation and in parallel, of a target oriented approach with a claim that every translation is made for a purpose, aim or intention. The classical cooperation model has been taught at translation courses for a long time. Table 1 presents actors taking part in that cooperation model by comparing it with localization workflow systems (see Esselink, 2000 for steps in localization workflow systems in detail).

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<sup>3</sup> Of course, nobody can expect from a translator or translation student to be a complete computer engineer or a programmer. But if they knew the computer structure more or less, this would have positive consequences in the translating process.

<b>Table 1: Manttari's Cooperation Model</b>	<b>vs.</b>	<b>Localization Workflow System</b>
1. the Initiator: the company person requiring the translation activity.		1. Project Managing
2. the Commissioner: the person contacting the translator.		2. Step of Translation and Engineering of Software,: website or localizable contents
3. the ST producer: The author of the Source Text, who does not necessarily take part in the creation of TT.		3. Step of Translation and Desktop Publishing of Documentation
4. the TT producer: the translator .		4. Step of Translation and Assembling of Multi-Media or Computer Based Training Components
5. the TT user: the person needing TT; for example a teacher to use TT for students.		5. Step of Functionality Testing of Localized Content: software, game or web localization (See Esselink, 2000)
6. the TT receiver: the final receiver of the TT production; for example students (qtd in Munday, 2008:78)		

As shown in the Table 1, the teaching of the classical cooperation model for budding translators seems based upon three steps: The Creation of the Source text, Translation Process (or Creation/Production Process of the Target text (TT)) and the Translated Text or Product. In the classical cooperation model, the translation of a text is ordered by an initiator and a commissioner makes contact with the professional translator. Then, the translator translates the text with a specific aim for the TT user who needs a translation for the TT receiver. This model foregrounds target-orientedness and attaches importance to the functionality of the translation that is generally different from that of the source text. Localization workflow systems, however, focus on translating digital contents and must be more coordinated than the traditional cooperation model as the localization of a product has a larger scale than simply a translating activity and it requires rapidness or a big responsibility for the simship of products. The traditional model by Manttari can also deal with the translation of digital documents like localization workflow systems but since the main focus of localization workflow systems on only the digital content, it is more advantageous in the translation of such texts. In addition, such workflow systems are mostly interested in the translation process rather than in the creation level of the source text , another difference between two cooperation approaches compared<sup>4</sup>. Many actors such as a project manager, localization engineer, computer engineer, software engineer, computer programmer, terminology experts and professional translator whose specializations are different from each other actively participate in a localization workflow system via a network or connected computers and all of these staffs are professionals in their fields. In the traditional cooperation model, on the other hand the translator (though often contacting other translators or area specialists to effectively understand the source text, i.e the text to be translated in the light of a defined goal) can feel isolated because in Manttari's coopeation model the translator spends his/her time on the translation process as an expert who can take the responsibility of the translational action, in other words, the translating activity (in the translation process) is directed by the translator's professionalism under the pressure of the client and commissioner with fewer synchronic actors in the translation process when compared to localization workflow systems. In parallel, in localization workflow systems, the translators are only one of the actors. Last but not least, the fifth step in the localization workflow systems can be associated with the translation as a product. However, this step is taken in order to measure or test the localized content again to make sure that no

<sup>4</sup> Manttari's model mentions the ST author though he/she is often passive in the translation activity.

mistake has been made throughout the translation process. Instead of teaching classical cooperation model for today's translation students at university degrees, more integrated and coordinated models as a positive result of the use of the technology must be taught in the classrooms accompanied by an experienced supervisor and high tech computers. It can nonetheless be said that the theoretical aspect of the classical cooperation model is still important however it does not meet today's conditions.

As is known, another functional translation theory is known as Skopos Theory (see Vermeer). Skopos Theory derives from an action theory or translational action theory (see Manttari) which defends that all actions have an aim and so does the translating activity. Vermeer used a technical term to describe the theoretical basis by tracing back to Greek Sophists<sup>5</sup> when he founded Skopos. In Skopos, there are three actors for the production of TT:

1. Client commissioning the action
2. Commissioner: the person contacting the translator
3. Expert or translator (or more broadly professional translator) (Vermeer, 2000:221-222).

This characteristics of Skopos Theory can be resembled to Manttari's model. Like in the cooperation model, the translator is the expert who "is responsible for the performance of the commissioned task, for the final translation" (Vermeer, 2000:222) but can make contacts with other translators or area specialists for an accurate translation as well (as also stated for the cooperation model above). Vermeer's statement gives again the impression that the translator is often alone or left alone with an inference that he or she is the core expert in the translation process (see also Pym's views). The state of feeling isolated in the translation process cannot be accepted today, especially with the arrival of new technological tools. In other words, the translator is no longer alone when he/she makes decisions about the translational action. The translational responsibility is now shared by a synchronic/networked project manager, coordinated team of translators/localizers, computer engineers, computer programmers, software developers, software engineers, localization engineers, terminologists, graphic designers, software publishers, localization vendors and so forth. All of these shareholders at least must have a general understanding of the text translated from the source material or the entire process. Therefore, we suggest that the teaching of Skopos Theory must be adapted to today's innovative conditions or in other words be integrated into the areas in which CAT tools<sup>6</sup> or ground breaking Internet applications are used. Though functional translation theories support a target oriented approach, they all start from a source text as a departure. However, in the digital age, as Pym puts it, there is "no longer a binary organization around "source" and "target". We now have Start Text (ST) complemented by source materials that take shape of authorized translation memories, glossaries, terminology bases and Machine Translation feeds" (2012:1). In parallel, translators or translation students in the digital age use databases to translate the text in the field of information technology unlike traditional translation practices departing from the source text. Pym, in his latest book summarizing Translation Theories, claim also that translators now start their translations from "a general intermediary version", which is also known as internalization<sup>7</sup>.



<sup>5</sup> Sophism originated in Greek. It consists of "sophos" or "sophia" which means "wise" or "wisdom". It originally refers to any expertise in a specific domain of knowledge or craft (see [http://www.philosophybasics.com/movements\\_sophism.html](http://www.philosophybasics.com/movements_sophism.html) 04.12.2014)

<sup>6</sup> CAT tools should not first call to mind Machine Translation (MT systems). Instead, they aim at assisting translators/translation students, for example to build databases to store and retrieve their previous translations or similar phrases. As claimed, they do not intend to replace human or dehumanize the translation process. It should here be remembered that all machine translations have already needed and need post-editing or revision which can only be done by a human.

<sup>7</sup> Internalization is a sine qua non for localization. It is defined by Lisa as "the process of generalizing a product so that it can handle multiple languages and cultural conventions without the need for re-design. Internalization takes place at the level program design and document development" (qtd. Esselink, 2000:25)

Fig1: Traditional Translation follows a binary organization between source and target text so the model: Schema 1 (see Pym, 2010: 124)

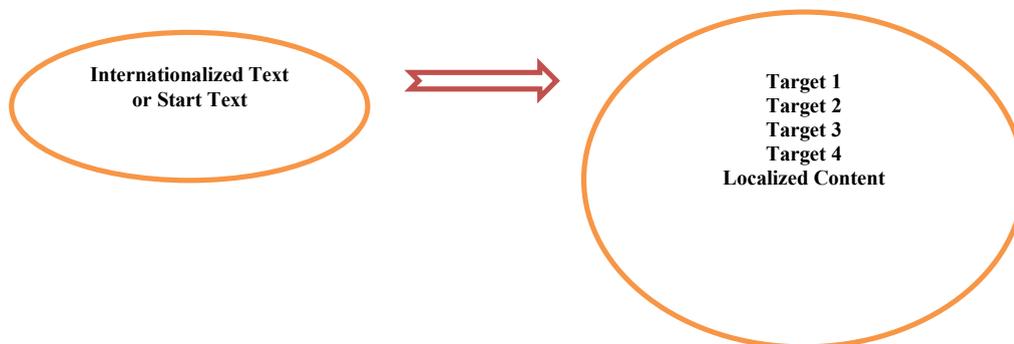


Fig2: Localization Model starts a from an internationalized version of the source text so the model: Schema 2 (compare Pym, 2010:124)

All of these changes can call to mind a paradigm shift in translation studies. Raïdo and Austermuhl also confirm this statement by claiming that “with regard to their impact on the use of information and communication technology (ICT) solutions by translation professionals and scholars, these changes constitute a paradigm shift. Whether the same hold true for the translation discipline as such, that is, whether the localization paradigm can be regarded as new, overarching approach to translation studies, will be an interesting development to watch” (2003:225). O’Hagan and Mangiron also name a chapter of their book entitled *Game Localization* (2013) as “localization paradigm”. Related to these developments, all of the innovative ideas or newness in the translation discipline must be offered both in undergraduate and graduate courses (e.g. courses about ways of localization/internalization, or courses showing how internalization can be done by combining theory and practice can be made available for translation students). In addition, new tools that may contribute to translators especially in the localization projects must be introduced into the translation curriculum also for translation students to feel prepared for real life situations. From this point on, the study gives definitions and features of some Computer Aided (Assisted) Tools and Internet based applications to evaluate their effects on translation students in the academic translation teaching.

### 2.1. The effects of cat or electronic tools and internet based resources on translation students

Considering the fact that localization volume has significantly increased in 1990s and a larger scale localization projects have been launched since then as a result of the simship of products, companies need fast translations. As put forward by Hatim and Munday (2004:112), increasing globalization and the impact of internet have already popularized fast translations of promotional literature, technical manuals, webpages and other all ranges of communication into other languages. All of these new conditions have necessitated the teaching of the use of cat/electronic tools<sup>8</sup> for translation students. Translators, as soon as they are experienced in this new user friendly tools, can create rapid and productive translations based on saving time in the translation process. CAT tools as also claimed by Bowker, are popularly increasing on the market and as a result translation students or trainee need more practical information about the types of computer tools which they certainly will encounter in the professional translation settings (2002:6) This study therefore next focuses on such prominent tools as Translation Memories

<sup>8</sup> Generally it is believed that cat/electronic tools are best used in the localization/translation of software programs, web pages, games, digital contents and technical manuals. However, in the future the area of utilization from these tools will certainly change. The word “localize” started even taking place of “translate”, such that one of the authors of *Translation, An Advance Resource Book* (2004) was offered by a translation agency to localize two sixteenth century Spanish poems into English (2004:113).

(TM), electronic corpora, terminology databases and translation management systems as well as *Internet based applications* for the purpose of showing translation students or translators how they can benefit from them.

### 2.1.1. Translation memories

According to Pym, the memory is most affected by the technology as a process in the age of the electronic communication (2011:1) There are many translation memory systems on the market to help translators especially in the translation of large scale translation/localization projects. Indeed, some efforts were already made to establish translation memories as early as the 1970s even though their popularization happened at a late time. Translation memories which target professional translators and translation students can easily be found in real time settings and must certainly be found in the translation training curriculum (see Bowker, 2002:7) At this point, translators and would be translators can ask such questions as: What exactly one can define a TM system and what features do they have in general? Translation memories in most cases are created gradually and include repetitive texts or previous translations. This means that using a TM system, translators or translation students, at the beginning of the translation project no longer have to start from the source text but from stored or previous translations in the TM databases<sup>9</sup>. Therefore, they are only in charge of translating sentences which are not available in the database. Bowker elaborates the definition of a TM by stating that “A TM is a type of linguistic database that is used to store source texts and their translations. The texts are broken down into short segments that often correspond to sentences (2002:92). In addition, allowing an automatic translation with their rich databases of terms, TM systems can be established either in the translation process or after. If it is produced after the translation is done, a process defined as “alignment” is used to match the text segments of the source text with their translations in the TT (Raudo and Austermuhl, 2003:236) One way or another, the use of a TM can save time and increase productivity for the translator. Since TM systems are composed of reusable texts, the possibility of making mistakes is minimized. This inevitably increases the productivity in the translated texts and if such tools are used by a fixed team of translators whose translations constantly feed the database of a TM system, the consistency becomes higher and higher. Because of this positive aspect of a TM, it must be more increasingly integrated into the translation curriculum.

TM systems have also changed the syntagmatic approach to the translation by foregrounding paradigmatic imposed on the syntagmatic (Pym, 2001:1) What does it stand for? Traditional translation studies witnessed once the presence of a structuralist equivalence, text linguistics, discourse analysis, pragmatics, functional translation theories and so forth. Then, the discipline moved from sentence level to the text and then to the project level. All these were based on syntagmatic (horizontality, linearity which comprises beginning, middle and end). However, TM systems foregrounded paradigmatic (verticality, non-linearity) imposed on the syntagmatic (see Pym, 2001). It can accordingly be said that translators now use TM systems paradigmatically and they, like in the traditional translation practice which goes back to the birth of the concept of equivalence, translate segment by segment or in other words on a sentence level. But here is a significant difference regarding the approach between old and new, which must be certainly explained. In old times, translators used to translate on a sentence level as they were blindly tied to the source text. In the digital age, there is no a single source text but a database of source materials (mostly anonymous) and their translations. So, the aim of the digital age translators is not to foreground the ST author’s views unlike old translation theories<sup>10</sup> but to translate the document on time and accurately by benefiting from so-called artificial equivalence (see Pym) which is associated with using a digital setting (e.g. databases of source and target terms) other than the single ST. At this point, it would be appropriate to mention that the use of a TM is sometimes approached suspiciously among translation scholars or translation trainees/translators. In parallel with this statement, Bowker in her one article investigates TM systems by comparing three student groups. She believes that TM systems can contribute to translators to improve the increased productivity but “less is known about the impact that the use of such tools can have on the quality of the translation” (2005:13). Compared to the quality, the productivity

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<sup>9</sup> This approach is also supported by Pym since he claims that the dominance of the ST is now replaced by a different concept, internationalisation (see Pym, 2004)

<sup>10</sup> Especially the ones before functional translation theories

today is a more important criterion for companies hiring translators to localize contents about products which have to be shipped with no delay. Since translators using a TM do not go back to check their translations for quality, they mostly care about the increased productivity in terms of the localization/translation market. We understand this from the fact that translators have already started dealing with highly specialized contents such as digital manuals (often in PDF format), digital documents, online help files etc. These texts are generally information focused and they are regularly updated through the use of a TM. All of these aspects or effects of translation memories must be taken into account on the current translation teaching. Last but not least, prominent TM tools for both translation trainees and translators can be listed as: Atril's Déjàvu, Champollion's Wordfast, Trados' Translator's Workbench, Star's Transit, Transit NXT (new generation), SDL Studio (new), trials or full licences versions of which can be used by translators, would-be translators, localizers and even translation agencies in collaborative settings

### *2.1.2. Electronic corpora*

An electronic corpus is a tool brought by the technology for language experts including translators and would-be translators so that they can also utilize it in the translating process of digital documents and in the academic translation teaching. There is a high amount of information about this specific tool in most of the prominent books on translation studies and practice (see Hatim&Munday, Bowker, Baker and so forth). Hatim and Munday state that electronic corpora were primarily established to support large scale dictionary projects at COBUILD in Birmingham, UK and then at other major publishers. (2004:118). Bernardini and Castagnoli define electronic corpora as “the collections of texts in electronic forms, usually grouped according to the topic, type, contract, business letter, etc.” (2008:45) and go on stating that corpora are various in kind such as original texts in one language, comparable originals in two languages (comparable corpora) or originals and their translations, also known as parallel corpora (2008:45) Especially, the parallel corpora can be resembled to a TM as the latter is also based on a database of source and target segments. When compared to printed texts, electronic corpora are easy to access and their databases including a storage of words can easily be established, which means that electronic corpora comprise larger amount of terminologies as also suggested by Bowker (2002:44). In old times, translators or translation students spent their time using a written dictionary and the translating process could be delayed due to the loss of time in the process of finding the equivalent of the source term in another language. If we consider that some translators are panic in the presence of the challenging physical conditions (e.g spending time in the pool of dictionaries most of which are out of fashion now because the information is always updated, and most of which do not include the specific context that directs the translation), the use of paper dictionaries is not a good option to save time. In the twenty first century, the shipping of products is not possible via written dictionaries. Due to these reasons, to understand the context, modern translators can also benefit from electronic corpora which are, however, basically used for linguistic research or analysis. One of the famous Egyptian translation scholars, Baker also conducts research on corpora in translation studies and translation teaching (see for detailed information: <http://www.monabaker.com>) This statement proves that corpora studies are popularized even in the academic circle of translation. That's why trained or experienced instructors in this discipline must include this topic into their courses as well as the teaching of electronic corpora.

### *2.1.3 Terminology databases*

Like TM systems and electronic corpora, translators or translation trainees in the course of training can also use various types of terminology databases based on a segment by segment translation or phrase translation. These databases can be prepared by terminologists or translators before they finalize the translation or after the translation is done. Terminology databases must be regularly updated and reviewed by a team of translators with the contribution of terminology experts to minimize erroneous translations especially affecting the release of products in a negative way. In this way the productivity that is the first priority of a translator and his/her colleagues on the localization or new translation market is increased and the consistency is protected. That's why before graduating from translation and interpretation departments, translation students must be taught at these user friendly tools. Unterm (United Nations Multilingual Database), WTOterm (World Trade Organization), Unicri (United Nations

Interregional Crime and Justice Research Institute) Thesaurus are some examples of terminology databases for translators (see <http://research.un.org/en/un-resources/terminology>).

#### 2.1.4 Translation management systems

It can be said that various user friendly tools some of which have been summarized in the study form TMS (translation management system) structure. The logic of these tools is to help translators/translation students in the translating process, as repeatedly stated. TMS hosting these tools is available for the same logic. This fact is also proved by SDL on its official website. The related information on the website clearly explains that TMS is prepared for large scale complex localization projects and the aim is to speed up or ease the translation process (see <http://www.sdl.com/products/sdl-translation-management-system/>). Then, it can be argued that the reason for the use of a TMS by a team of translators in the charge of a localization project is first and foremost to increase the productivity<sup>11</sup> and eliminate risky situations such as the delay of a product by facilitating the translation process and in parallel eradicating concerns about producing a wrong translation. The addition of courses including a TMS into the academic translation teaching is thus a must.

#### 2.1.5 An umbrella term: Internet

Last but not least, it would be correct to state that perhaps the mother of all the user friendly technological tools having been summarized so far is world wide web (Internet). Internet contributed to translators in many ways. Thanks to it, they can make regular contacts with each other and receive texts electronically across national and cultural borders (Gil&Pym, 2006: 6). The internet has numerous resources, even online terminology databases or applications which can help translators in the translating process. The use of such online tools means also saving time or increased productivity but some of Internet websites offering erroneous contents can be misleading as well, especially the free ones or others whose developers may be unknown. Therefore generally those types requiring subscription or created by the prominent companies which focus on the translation technology must be preferred both in real life situations and in translation courses (see <http://wtoterm.wto.org/> and <http://www.nubuto.com/><sup>12</sup>).

### 3. Conclusion

The study has shown that user friendly tools brought by the technology have enormously facilitated what translators translate or localize in the projects for which they are responsible. In the past, a translator would translate by using a pen and paper or a typewriter. So the translation volume was low. However now a new term instead of translation is popular, namely localization, which is a prerequisite for the products to be shipped all over the world. This new field of practice in translation studies requires further research and studies and as a result today's academic and translator circles deal with this topic by taking into account theoretical and practical points. Thanks to the technology, the working style of translators has changed into using cat/electronic tools which inspire them to deal with the increased productivity. Besides, the arrival of technological tools provides a new insight into the traditional translation theories or practices. Considering the needs of translation trainees in the twenty first century, it is now time to leave traditional models or at least to integrate them into the technology. Indeed, what essentially matters today is to adopt more coordinated collaborative models, which can increase the productivity on the translators/localizers' and companies' sides. In addition, especially the most well known functional theory of translation studies, Skopos Theory must be integrated into the new setting. Here we suggest a new term, that's the *technology integrated Skopos Theory*. We live the digital age now and nothing can be the same as it did in the past. Combining theoretical and practical approaches, we can finally say that the teaching of technological tools in the

<sup>11</sup> Productivity here is a key word. It is repeatedly stated throughout the study as the criterion which should be kept in translation, especially for the market based culture in twenty first century

<sup>12</sup> <http://wtoterm.wto.org> created by SDL; <http://www.nubuto.com/> created by Dragoman Ltd.

academic translation teaching for translation students to use in the translation process is indispensable and must be a priority based upon the current popularity of the localization market.

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