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Towards Teaching CAT tools in Libyan Universities

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الملخص

شهدت بدايات القرن الحالي إعادة النظر بجدية إلى الفوائد المحتملة من استخدام تكنولوجيا الترجمة في التعليم والتدريس. فقد أعرب الكتاب والباحثون المعاصرون عن آرائهم في دعم استخدام أدوات الترجمة بمساعدة الحاسوب (كات تولز) في تدريس الترجمة. تختص هذه الدراسة بالسعي لاكتشاف مظاهر استخدام (كات تولز) في الجامعات الليبية. هدف الدراسة تقييم الوضع الحالي في مناهج الجامعات الليبية من خلال البحث والاستبيان للتأكد من استخدام (كات تولز) في الجامعات الليبية من عدمه. استخدم الاستبيان كأداة بحث لجمع البيانات المطلوبة. الهدف هو معرفة ما إذا كانت أدوات (كات تولز) قد تم استخدامها في الفصول الدراسية أم لا. أثبتت نتائج الاستبيان عدم استخدام (كات تولز) في تدريس مادة الترجمة في الجامعات الليبية بسبب بعض المعوقات والتحديات. وبغض النظر عن كيفية تنظيم الاستبيان أو مدى ثرائه بالأفكار، فإن الباحث يؤكد على أهمية تدريس (كات تولز) في الجامعات الليبية ويسعى لكيفية امكانية تنفيذ هذا الطرح في الجامعات الليبية. وتشير نتائج هذه الدراسة إلى بعض الاجراءات التي يجب أخذها في الاعتبار واستنباط بعض الأفكار لإمكانية تطبيقها في الترجمة في القاعات الدراسية بكلياتنا الجامعية.

الكلمات المفتاحية: أدوات الترجمة بمساعدة الحاسوب، تدريس الترجمة، الترجمة الآلية، تطوير مناهج الترجمة.

Abstract

The beginnings of twenty first century have witnessed a serious of reconsideration of the possible benefits of translation technology in learning and teaching. To this effect, modern writers and researchers have expressed their views in support of the use of CAT tools in translation teaching. This study is devoted to the explore the aspects of the use of CAT tools in Libyan universities. The aim is to reveal the current situation

in the Libyan universities through research and a questionnaire. The questionnaire is used as an instrument of research to collect the required actual data. The aim is to find out whether CAT tools have been used in the classrooms or not. The researcher attempts to highlight the idea that CAT tools should be adopted in Libyan universities. The questionnaire findings approved that translation technology was not used in teaching translation in the Libyan universities because of certain obstacles and challenges. Regardless of how the questionnaire was organized or how rich in ideas it was, the researcher would still have to focus on the significance of CAT tools and how they can be implemented in Libyan universities. However, the results of this study suggest some measurements which should be taken into consideration.

Key words: *CAT tools, translation teaching, machine translation, curricula adoptation.*

1. Introduction

The idea of searching in the area of Machine Translation (MT), related to the researcher of this paper started during some years of experience in teaching translation courses to undergraduate students at the Department of English, Faculty of Arts, Al-Mergib University in Libya. The main observation during that period was that undergraduate students often seem to have higher expectations of performance than how they actually do in practice, particularly in practical process of translation.

Actually, students nowadays use software systems rather than traditional tools in the process of translating their assignments. They even do not bring with them the required translation tools such as dictionaries, papers, pencils and rubbers for practical translation in the classrooms. Instead, they bring electronic devices such as Laptops and/or smart mobile phones or use computers. Moreover, the researcher noticed that students prefer to use applications of translation software in the classroom not only for looking up the meanings of words, phrases or sentences in order to get correct pronunciations or accurate meanings but also to achieve software translation. Students believe that using technology in teaching translation is useful and more beneficial and

will save time and effort. Therefore, they always ask for changing the translation teaching methods used.

Due to the fact that technology has become tangible reality, modern laptops, computers and some types of smart mobiles are revolutionizing the traditional teaching and translating in the classroom. On the other hand, younger generations of translators entering the translation market today will often have been educated in universities featuring state-of-the art computer infrastructure and translation technology will probably feel that Computer-Assisted Translation (CAT) is the natural way to translate. They want to go along with the curricula in other universities. Moreover, software translation has become a fact, in the last few years, machine translation was developed rapidly and used widely in the world: in the organizations, trade companies, professional translators and in university translation teachers and students. In addition, modern technology has been utilizing machine translation in different aspects.

2. Background

Computers and the new technologies have become an essential part in the daily work of any translator. Recently, a study by Borras and Medina (2005) adds more emphasis that has been placed on competence to use different software, especially for CAT tools. Moreover, Alkhatnai (2017) claims that the changing nature of markets needs and employability concerns as well as the changing nature of teaching and learning pushed all disciplines whether old or new to look for alternative teaching methods.

The current curricula of teaching translation for undergraduate students in Libya aim only to provide a general theoretical introduction to translation in addition to practicing translating some texts from English into Arabic and vice versa. It also provides students with a general overview on the types of translation and translation techniques that may help them in their graduate studies in any field of translation. It is worth noting that several translation courses cover only basic topics related to translation theory and practice.

By surveying the current situation of teaching translation in Libyan universities, and through investigating the Course Description I *(which is a book issued by the Ministry of Higher Education and Scientific Research in Libya in1990),* the book states that the course description of teaching the course 'Translation I' is an introduction to translation which allows students to be acquainted with translation theories and practice. The main objective of the course is to provide students with basic ideas about translation, translation process and the contemporary theories proposed by some scholars in this field. The course 'Translation II' also provides students with the opportunity to practice translation from English into Arabic and vice versa to help them apply and acquire the basic skills of translation.

3. The aim of the study

The paper attempts to investigate the current status of translation as an academic discipline and as profession with special reference to the use of technology in teaching translation and performing various translation tasks. It also aims to explore the current status of translation in terms of technology use with special focus on the needs, requirements, expectations and concerns of the perspective "Translation teachers" in some Libyan universities.

Because softawre translation is a new trend and a universal phenomenon that needs to be discussed, taught and used for training and translating purposes, this study aims to introduce this new tendency with a special focus on the potentioal use of translation software in translation teaching and traslator training in Libyan universities. Thus, the study sheds some light on the nature and the impact of CAT tools on transaltion as a discipline as well as translation teachers and students, and would offer some insights into how to interact and deal with these new applications, and the challenges that might encounter the users.

4. Translation Teaching in Libya

Translation, as (a) module(s), has been taught to undergraduate students in language departments in Libyan universities: Benghazi University and Tripoli University for a long time (since the 1950s), and later in Al-Mergib University (where the current study is conducted) and other Libyan universities. However, translation was only taught as a subject within language departments at all Libyan universities (Giaber, 2007).

Currently, two translation courses being taught are part of a BA program in English Language. English departments in the Libyan universities teach translation as part of their BA programs in English. Two translation courses of 2 credits a week, one in the third year and the other in the fourth, are taught in the program. The translation courses consist of theoretical lectures and practical courses in translation. To the best of the researcher's knowledge, translation software has never been taught as a separate course to undergraduate students in Libyan universities. According to the pilot study and discussion with some translation teachrs in some English departments, translation instructors make only occasional references about machine translation.

It is worth noting that the course descriptions mentioned above are not compulsory in the sense that they only serve as guidelines for translation instructors to follow in teaching translation courses. Therefore, teachers are allowed to design and implement a translation course syllabus that serves and achieves their study programs outcomes. This situation is similar to what Mansouri (2004) pointed out:

> It should be pointed out that the "course discretion" suggested
> the study assumes the situation (as is the case in the most of the
> English departments considered) of teachers having free hand in
> designing and implementing the translation syllabus on which
> their teaching programs are bases. [....]. (Mansouri 2006: 14)

On the other hand, a large number of tutors who teach translation at different universities in Libya are not well-qualified to teach translation as they are holders' of

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graduate degrees in English literature or teaching whether from national or international universities. A tutor, for instance, who shows an interest in teaching a translation course, may be asked to teach the course without considering any requirement. Therefore, the trainers are at best merely interested rather than specialized in translation (Deeb, 2005).

5. Literature Review

Over the past decades, there has been an exponential increase in the studies of machine translation from a variety of perspectives including, assessment, implications and applications, e.g. Melby 1994; Lockwood 1995; Rochlin 1997; Texin 2003, and Alkhattani (2017) among others. However, since the focus of this study is the using CAT tools in teaching translation in Libyan universities, this section reviews studies on translation software and how CAT tools can be adopted in the curricula of teaching translation in Libyan universities.

To begin with, (Ping, 2009: 162) machine translation (MT) is defined as the use of computer applications to automatically translate texts from one natural language into another. Hutchins (1995: 431) described MT as 'computerized systems for the production of translation, with or without human assistance or intervention' in unassisted or fully automatic MT systems, whole texts are translated without any human intervention. Moreover, (Bowker, 2002: 6–7), added that CAT Tools can range from general-purpose applications such as word processors, electronic dictionaries and spell checkers, to more translation-orientated tools such as terminology-management systems, translation memories (TMs) and web-page translation tools. Furthermore, (O'Hagan, 2009: 48) pointed out that Translation Memory (TMs) are among the most popular and have become the main CAT tool since the late 1990s.

On the other hand, Breika (2016) carried out a study on the importance of using technology in the translation process. The researcher stated that technology plays an

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important role in the quality and the quantity of the outcome of the translator. This came up with the field of localization; which is a new field in the translation industry that is expanding rapidly, and depends a lot on the usage of technology in translation. In addition to creation of several software applications, which would help, improve the translator's outcome.

Moreover, the paper talks about the differences between translation and localization and the usage of technology in them. With the aim of providing a description of the translational process, the study focuses on the two major aspects that are applied in translation practice. Those two aspects are Machine Translation (MT) and Computer Assisted Translation CAT tools with a brief history of both aspects and how they work. In addition, it provides good information about the advantages and disadvantages of using CAT tools and the main features and characteristics of CAT tools. The study relied on the analysis of the responses of a questionnaire answered by English-Arabic translators about the CAT tools used by English-Arabic translation and vice versa. The most used CAT tools by English-Arabic translators are: (i) SDL Trados, (ii) Wordfast and (iii) MemoQ, in addition to other tools.

Besides, the study pointed out that the Arabic translators encounter some problems when using CAT tools. Therefore, it classified these problems into technical problems and linguistic problems. Regarding the technical problems, the researcher mentioned that there is a difference in text direction between the English language and the Arabic language, when (i) dealing with tags, it is considered by some translators a tiring process, but it has to be handled with extreme caution, for making a slight mistake might turn the whole file into a mess and, (ii) there is unclear error messages where the translator would not know the reason easily, especially while using Wordfast; besides, (iii) SDL Trados has many shortcuts for the same feature with no clear reason.

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On the other hand, the linguistic problems are concerned with differences, for example, in punctuation: unlike English, Arabic does not often use full stops in the middle of a paragraph and it is preferable to use comma, and this sometimes causes a problem while performing the quality assurance test. Moreover, English sentences are always nominal mostly with the SVO format, while in Arabic it has both nominal and verbal sentences, so in the translation, the translator might want to start the Arabic sentence with the verb, but in this case the verb does not appear in the same segment in another one. The same case happened with adjectives.

In order to bridge these differences and to tackle such problems, the study, pointed out that, on one hand, some problems could be solved whether on the long-term like the technical problems related to the OCR issues that need more attention and development to give better solutions, or short-term like lack of knowledge and training. On the other hand, some challenging problems would always face translators like the structural difference between the Arabic language and the English language.

Another study conducted by *Universidad de Alicante* (2005) in Spain confirmed that computers and the new technologies have become an essential part in the daily work of any translator. Several specialists (Badia & Colominas 2001; Valero & de la Cruz 2001; Montalt 2002) described this new trend and highlighted some changes translators had to experience so as to adapt themselves to modern market conditions.

However, the study claims that students should receive up–to–date knowledge about machine translation while being at university to meet the market requirements and needs. Students should be introduced to the basics of software localization while being at university. Besides, university should mainly provide students with the necessary skills and abilities to accommodate to variable working conditions. On the other hand, it is supposed that university should adjust its curricula to the prevailing demands from society because there is an increasing demand of highly specialized translators. Upon a questionnaire analysis, conducted by the study, some professors

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and experts think that Spanish undergraduate students are only learning the basics of some subjects, and receive only occasional references to certain specific subjects. Therefore, those students who want to become experts in fields such as software localization need to go for additional instruction at higher levels after finishing their undergraduate.

According to the Spanish study, to provide highly specialized translators, national and international private companies offer training courses with different experts and professionals involved in this sector (Rico Pérez 1998 & 2001; Arevalillo 2000; Locke 2003). Seemingly, several seminars and graduate programs have also been planned in order to complete the academic teaching of some undergraduate students.

Having consulted the available English and Arabic literature, the following study is found closed to my study. Although the issue of software translation has been discussed by many writers worldwide the most notable being, (Alkhatani, 2017), to the best of my knowledge is only study was conducted by the use of Project Based Learning (PBL) entitled: *Teaching Translation Using Project-Based-Learning*.

According to the author, the last few years, interest in improving the teaching of translation increased immensely. The researchers' idea is to evolve (PBL) concept. The project means doing a piece of work that needs a skill, effort and careful planning. PBL has become a popular activity. Students discover or explore new issues and topic through learning circles. This is the way of giving the chance to students to develop their learning and skills outside the classroom, too. Moreover, this method is popular across many education fields. The main essence of it is involving the students in an authentic and practical translation project.

Likewise, Lamer and Mergendoller (2010) stress the following essential elements of (PBL): starting with a compelling question or challenge; creating a desire

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to acquire or create new knowledge; requiring critical thinking, communication, collaboration and technological skills; incorporating feedback and revision; making a publicly presented product; rendering students' voice and choice.

In addition, according to the studies by Galan-Mañas (2011) and (Huang *et al.* (2012), PBL implementation also shows the increased motivation among students. Students were reported to have improvement in such variables as students' attitudes, satisfaction and self-achievement.

The results of PBL implementation in teaching translation has been already proved in several areas. For instance, the study by Li, Zhang, and Fe (2015) analyze the effect of PBL utilization during the business translation teaching in the Asian context. The researchers reported the positive perception of the students; however, the limited character of research makes it necessary to conduct the further studies on the matter.

Finally, the current study attempts to contribute to the existing literature on machine translation as an overview of all the software now available for translation "Free & paying", from a translation perspective assessment, and how such applications and implications can be achieved for teaching of translation in the Libyan universities. It aims to highlight both the teaching translation software and implementing methods of teaching. Moreover, this study is the first of its type in Libya region, and it sheds light on both exploring translation software and providing translation teachers with basic databases on the applications of CAT tools in the university classroom. The aim is to support the theoretical background on translation software and how it can be adopted and implemented in university curricula. It is hoped, therefore, that the outcomes of the study will draw the attention of the Libyan universities management to include translation software teaching in the translation syllabi in Libyan universities.

6. Methodology

Since this study is the first of its type in Libya, lack of information about the curricula and teaching of translation in Libya has led the investigator to design a questionnaire. For convenience sake, the research provides specific details on the questionnaire with respect to its significance, design, objectives, plan, data statistical analysis, and findings.

7. The Questionnaire

This study is an initial attempt to shed light on some aspects of translation technologies such as their history, applications and the need for such technologies in Libyan universities. In order to assess the extent of use of CAT tools for teaching translation courses and to survey the current situation in Libyan universities, the researcher intends to design a questionnaire that aims to investigate and explore the extent of familiarity with translation technologies and the use of CAT tools for teaching and training purposes in Libyan universities.

This study presents an assessment of prevalence of CAT tools and their use for translation teaching purposes. By assessing how common the use of CAT tools is, and by making a case for the usefulness of these tools, the researcher seeks to raise awareness among academic reform circles, faculty and learners about the need to keep abreast with the latest in technological development.

Having reviewed references on research methods for obtaining and gathering data, the researcher learnt that designing and administering a questionnaire is more appropriate for collecting data than conducting interviews or eliciting observations. The questionnaire is carefully designed in order to obtain the most accurate and reliable data possible and minimize as much as possible any problems that might arise during the analysis and interpretation stage. In the questionnaire survey, the researcher seeks to test the hypothesis that translation software has not been introduced or used in Libyan universities.

The questionnaire was distributed to 60 randomly selected male and female faculty teaching English and Translation Studies teachers in different state and private university institutions. Translation technology–use related questions that included a close-ended question on whether the teachers and their students use translation software in the classroom or not, and open-ended questions asking for the reasons behind not adopting translation technology in Libyan universities, and when and how it can be adopted are provided. The open-ended questions are supplemented by extra space for the respondents to provide additional information and express their views. A close-ended question on teachers' agreement or disagreement with statements made by modern researchers and writers on the need to use translation software was put to the respondents.

A total of 38 people participated in the study informed consent respond, as participants could only agree to proceed with the survey after reading the description of the aims of the research. The questionnaire was distributed to 60 teachers but only 38 were filled and returned. Twenty-five questionnaires were filled by male teachers and eighteen were filled by female teachers who work on both full-time and part-time in different institutions. In terms of qualification, nine teachers hold PhD degrees and the rest hold MA degrees in teaching English or Linguistics but only few hold a Master's degree in Translation Studies.

8. Summary of the questionnaire analysis

The analysis showed that 87% of the participants reported their views which support the statement of the questionnaire about increasing demand for highly specialized translators who are familiar with CAT Tools. Furthermore, participants revealed their views concerning the benefits of having this course as a project. For example, regarding the advantages of using technology in teaching translation 97% of the participants said it is useful and time saving. In terms of quantity 89% agreed that CAT tools help the translators, and in terms of quality 79% provided that CAT tools would help improve the quality of the translation. In addition, 79% said using CAT tools increases competency by providing the appropriate strategies for effective

translation. Moreover, a fully 97% agreed that the key characteristic of using CAT tools is that a human translator controls the translation process and the technology is used to assist translators. Above all, one most important fact is that many participants stated that using technology would open their eyes to new products and deepen their understanding of how software and CAT tools are used.

Therefore, in order to cope with the global academic curricula of teaching translation technology and to modernize Libyan universities curricula, there should be constant steps by all Libyan universities to include translation technology courses in their curricula. The time has come to be realized that translation software has become an important aspect in the academic circles.

9. The Need for Teaching CAT tools in Libyan Universities

During the last decades, interest in improving the teaching of translation has increased globally. According to a study by Shadia (2001), technology has permeated almost all our routines and become an essential part of our life, and translation is not different from all the other aspects of life. Currently, translation technology e.g. CAT tools can offer a wide range of competing commercial CAT products that are enabled for Arabic. The most widely used are: SDL Trados, MultiTrans, MetaTexis, LogiTerm, Wordfast, Star Transit, and Déjà Vu. Moreover, while translation memory based on CAT tools differs from one software to another, there are core basics that all software have in common such as Termbase, Tags and other Features.

On the other hand, CAT tools have other features like (i) Quality Assurance (QA), (ii) Checkers and Testing, (iii) Analysis (reports), (iv) Preview, and (v) Filters. A computer system (Ibid, 2001) can perform Machine Translation (MT) alone or the user is expected to apply post-editing or pre-editing in order to get high quality machine translation. For example, comparing between machine translation and a human translator, Brown reckons as follows:

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> A computer can work on draft translation at any time of the day, thus a 10.000 word translation that would take a human translator about a week to produce could be done overnight ready for editing the next morning. Better quality control since text already entered in the software will not need to be re-checked if it can be identified uniquely. (Brown 1998: 70)

This is the equivalent of 40 standard pages (250 words each). The time saved is over 6 days, which can not only considerably ease the burden on the translator but also allow for ample time for revision and quality control and assurance.

As technology advances, more and more electronic and online dictionaries and encyclopedias are becoming available. These are used as resources for translators that can be referred to during the process of translation. In short, a key characteristic of CAT tools is that a human translator controls the translation process and that the technology is merely used to assist translators (O'Hagan, 2009: 48) and to 'increase their productivity and efficiency' (Bowker, 2002: 4).

Concerning the importance of technological skills and competence in gaining employment, almost all participants agree that translators should be provided with appropriate training on how to use the following tools and technologies: Office programs (word processing, spreadsheet, and presentation), TM systems, terminology management systems, localization programs, and desktop publishing programs.

Currently, the field of translation technology has started to attract the attention of translation scholars in the world, and consequently in Libya in the recent years due to several factors. In this context, Hakkani et al. (1998: 4) point out that: (i) the first factor is the changing nature of the translation profession, with more complex translation tasks requiring translators with greater technological competence, such as using desktop publishing (DTP), (ii) the second factor is obviously the new demands and practices in the field, such as localization, post-editing MT output, web

translation, fansubbing, and crowd sourced translation, (iii) the third factor is, of course, the changing profile of the learners. The new generation of learners often consider the use of traditional methods of teaching and translating unattractive, unproductive and demotivating. The role of translation technology in translation teaching curricula in Libya has not been brought on board yet. In contrast, one most important fact is that many participants stated that using technology would open the students' eyes to new products and deepen their understanding of how CAT tools are used.

Therefore, in order to keep pace and align with global academic curricula of teaching translation technology and to modernize Libyan universities translation teaching programs, Libyan universities must take steps towards including translation technology courses in their curricula. The time has come for the oversight authorities and academic bodies to realize that translation software has become an important aspect in academic circles.

10. The Questionnaire Findings

The following findings proposed further down are based on the analysis of data collected from 38 participant teachers teaching translation studies courses in Libyan universities:

1. The current translation courses in Libyan universities do not include any reference to machine translation or any CAT tools. Students only learn the basics of Translation Studies as a discipline;

2. Translation software has not been used in Libyan universities until now because it is not included in the curricula;

3. The majority of teachers who participated in the study support the use of CAT tools in teaching translation courses in Libyan universities;

4. Curricula need to be revised, infrastructure should be provided and faculty members need further technical and subject-related training, especially with respect to translation technology and more support for in-service training of practicing translators is needed;

5. Participants in the questionnaire call for necessary measures to be considered to adopt using CAT tools in the classroom and point out the need for traditional methods of translation to be replaced by more adequate and effective ones;

6. Using CAT tools needs well-qualified users; therefore, universities should provide students with the necessary technical knowledge and skills to prepare them for the translation market;

7. Finally, the findings also have pedagogical and practical implications and would be very useful for translation trainers and translation tool developers.

11. The Questionnaire Conclusion

To sum up, in view of the results of the study, the delay in implementing translation technology in Libyan universities was due to certain factors and obstacles: (i) firstly, machine translation is not seen as an essential course in translation studies curricula, (ii) secondly, there is a lack of skilled trainers and technical support from the IT department, (iii) thirdly, there is no infrastructure for using CAT tools in the classroom; neither computers nor internet access are available in the classroom. To fill this, the findings suggest that some measures should be taken, some of which are of a methodological and pedagogical order, such as conducting diagnostic studies to assess how translation is taught and identify teacher and learner needs, while others are of an administrative and practical nature, such as espousing advanced technologies, providing the necessary equipment and training faculty in this respect. It is hoped that these results will prompt students and teachers to take stock of verifying the situation and engage in calling for the necessary reforms that are likely to introduce CAT tools in curricula and in the classroom.

12. Recommendations

In the last few years, interest in improving the teaching of translation has increased significantly. Machine translation has become part and parcel of teaching translation at university level globally. Given that the main aim of translator training institutions is to produce qualified translators who are conversant with modern technology as

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harnessed for the translational task, more attention needs to be paid to revising translation teaching in Libya. In this context and based on the above mentioned findings, the following recommendations are made:

1. The study can be useful for learners and teachers. It also can contribute a significant input into the work of educational planners and curriculum design advisors. Besides, discovering the impact of CAT tools on teaching will be a potentially fruitful area to study.

2. Participants in the questionnaire pointed out that translation education needs to be encouraged by the Ministry of Higher Education, and the use of CAT tools should be planned and designed on pedagogical principles to suit the specific needs of the students.

3. This study can also be beneficial for future research work in the field. Heads of Departments of English and Heads of M.A. and PhD Studies Committees can tap this study for topics of interest and motivate more people to conduct research on MT and CAT tools.

4. The need for the curriculum design department at the Ministry of Higher Education in Libya to launch a professional development program that would enable its members to identify and define needs, propose reform and development, and collaborate with international academic institutions.

5. The need for the Ministry of Higher Education to reconsider its stance on the use of distance education technology and implement elements of online course instruction in Libyan higher education.

6. These findings support new research worldwide in favor of using translation technology teaching. The results open an avenue for further investigation of this issue in other parts of Libya and other Arab countries in order to have a broader picture of teaching CAT tools in this part of the world.

7. The findings of this study may have implications for other learning applications in other subjects such as writing or speaking, since there may be similarities in the

perceptions of translation technology practices between university and the translation market.

8. Teaching and implementing CAT tools shed light on the knowledge and skills that translation instructors and professional translators need to acquire in order for them to effectively be capable of utilizing such translation software.

9. It is hoped that this project will initiate a healthy discussion on the challenges facing the implementation of CAT tools in Libyan universities.

10. Once the academic institutions have integrated dedicated software in translation teaching, other disciplines are likely to follow suit, and advanced technology is likely to be promptly introduced as it gets on the market.

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