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| RESEARCH ARTICLE

The Place of Technology in Translator Training Programs in the Arab World

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| ABSTRACT

Translation technologies knowledge, or 'technological competence,' seems to be an agreed-upon component in various translation competence models (see Kiraly 2013, Pym 2013, and the PACTE group's 2003 and 2005 publications). The current study aims to identify the place of technology in translator training programs in the Arab world. Additionally, it seeks to ascertain whether technology-related courses are clearly recognized in the programs' objectives and course descriptions. To conduct the study, all universities offering MA programs in translation and/or translation and English were identified. Then, a corpus of all translator training programs that offer translation technology courses, including program objectives and course descriptions, was compiled. Finally, a comprehensive description and analysis were carried out to identify The Place of Technology in Translator Training programs in the Arab World. The results of the study reveal that 'technological competence' is largely ignored in the vast majority of MA translation programs curricula in the Arab world specifically when it comes to localization courses.

| KEYWORDS

Translation technologies; CAT tools; localization; translator training; Arab world

| ARTICLE INFORMATION

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Introduction

The advent of technology has transformed translator training programs worldwide, affecting both the courses offered and teaching approaches. The inclusion of technology-related courses to respond to the needs of the market and to develop translation technology skills for students can be clearly seen in the curricula of translation programs in various parts of the world. These changes resulted in the introduction of various tools (TMs, QA tools, localization, term extraction, MT quality evaluation, subtitling, etc.) in translator training programs. That is to say, such translation programs offer various courses to train students on new skills and tools.

Several scholars discussed the importance of The inclusion of technology-related courses in the curricula of translator training programs. Kenny (2020) highlights the importance of technology for translators. She maintains 'an understanding of contemporary translation is almost impossible without such knowledge' (30). Likewise, Bowker and Marshman (2009) discuss the importance of technology in the context of translator training and highlight the disparities between the skills translators need and what universities offer in the area of technology. Moreover, Andrew Rothwell and Tomáš Svoboda (2019, 1) claim 'translation practice has become increasingly technology driven and technology dependent'. In the same manner, Anthony Pym (2006, 114) casts light on this issue and explains that 'the teaching of translation technology is worth discussing because it can be done badly'.

In the context of Arabic translation studies, only a few studies have touched upon the relationship between academia and industry. For example, Al-Batineh and Bilali (2017) study the qualifications of translators that translator training programs in the MENA region (Middle East and north Africa) try to shape and create. Further, they compared these skills to the needs of both local and global markets. They conclude:

> "Clearly, the focus of translation programs in the MENA region at the undergraduate level is on communicative and textual competence. This focus is justified as the different undergraduate programs attempt to develop students' A, B and sometimes C language skills as well as their communication skills. On the other hand, graduate translation programs place less emphasis on communicative and textual competence, as the assumption might be that this particular competence has been addressed at the undergraduate level". (13)

This conclusion clearly shows that technological competence is, very much, ignored by both MA and BA translation programs in the MENA region. Here, it is crucial to mention that Al-Batineh's and Bilali article was published in 2017 and most probably, data were gathered even before. That is to say, it is important to revisit the curricula of translation programs in the Arab world and further pay considerable attention to the so-called 'technological competence' as it plays a crucial element in most of the suggested translators' competence profiles and translators' employability as well. That is to say, more focused research is needed to cast the light on the current trends of translator training programs in the Arab World i.e., technology-related courses. Such courses include CAT tools, localization, software localization, terminology studies, video game localization, corpus-based translation, Audiovisual translation (dubbing and subtitling), and machine translation.

Discussing and examining teaching technology-related courses is a crucial issue, as this topic is largely neglected in the context of Arabic translation studies. The current research attempts to reveal the state of the art of the inclusion of translation technology-related courses in the Arab world in terms of the number and type of technology-related courses offered, program objectives, and course description of technology-related courses. The results of the current study, in turn, can serve as a primary source for decision-makers in translation programs in the Arab world in terms of what is there and what is needed.

Literature review

No one can deny the importance of technology in the work of professional translators. Technology has affected both the volume of translators' work and the way translators perform their tasks. Researchers from the field of translation studies have tackled 'technology' from various perspectives. The following paragraphs are intended to survey a number of works that focus on the notion of technology within the context of translator training. Dorothy Kenny (2020) argues that 'There is broad consensus in the literature that anyone who wishes to become a professional translator of pragmatic and technical texts should acquire an understanding of, and an ability to use and critically appraise, contemporary translation technologies.' (498). That is to say, using modern translation technologies such as CAT tools, localization tools, audio-visual translation software, project management tools, etc. is now considered an essential competence for translators wishing to compete in the modern translation market. In the same manner, several scholars have highlighted the importance of the inclusion of translation technology in translator training curricula. (Kenny 1999; Bowker 2002; O'Brien 2002). Sayaheen et al. (2025) mention that technological competence is mostly ignored in MA translation program curricula in Jordan.

The tendency to develop translators' technical skills is reflected in various translator training programs and translation competence models. The focus on technological competence is evident in various translation competence models. That is to say, several scholars have maintained the importance of technological competence for translation students. For example, Kiraly (2013, 212) proposes a four-dimension translation competence model in which technology can be situated within the 'experience and learning' competence.

[1]PACTE group (2003) distinguishes between translation competence and performance. The latter refers to the translator's ability to translate, while the former refers to the set of fundamental skills. (47). Further, they divided translation into six sub-competencies and what matters here is the instrumental/professional sub-competence as it deals with translators' knowledge and ability to use technologies. In the same manner, PACTE group (2005) revisited their suggested model of translation competence and confirmed that translation competence consists of sub-competencies. One of these sub-competencies that also appear in the 2005 model is the instrumental sub-competence which 'is made up of knowledge related to the use of documentation sources and information technologies applied to translation.' (610).

[1] 'The PACTE research group (Process in the Acquisition of Translation Competence and Evaluation) was formed in October 1997 to investigate the Acquisition of Translation Competence in written translation into and out ofthe foreign language (inverse and direct translation). All the founding members of the group are translators and translation teachers who train professional translators in the Facultat de Traducció i d'Interpretació of the Universitat Autònoma de Barcelona. Our language combinations include English, French and German ↔ Spanish and Catalan.' (Beeby, A., etal 2003, p. 2)

In general, translation technology refers to various computer tools that translators use to perform their jobs more effectively and to save time. O'Brien, Sharon, and Rodriguez Vazquez, Silvia (2020, 264) state

> "In its broadest sense, translation technology is understood to include a large array of computer tools that help translators do their jobs, including word processors, spell, style and grammar checkers, the World Wide Web, corpus compilation and analysis tools, terminology management tools, translation memory tools (TM), translation management systems (TMS) and machine translation (MT)".

Lynne Bowker (2002) lists a comprehensive list of tools and technologies that translators can use to do their work. He further classifies the list into three sub-types: human translation (HT), CAT, and Machine translation (MT) and each category includes a number of tools. Table (1) below presents these tools:

Table 1. An overview of some different types of technology used in translation (Bowker, 2002, 7).

HT	CAT	MT
• Word processors • Spelling and grammar checkers • Electronic resources (e.g., CD-ROMs) • Internet (e.g., WWW, email)	• Data-capture tools • Corpus analysis tools • Terminology-management systems • Translation memories • Localization and Web-page translation tools • Diagnostic tools	• Machine-translation systems

Methodology

The current paper aims to provide a comprehensive description and analysis of MA translation and interpreting programs in the Arab world in an attempt to identify the position of technology-related courses and the readiness of MA programs to equip students with technological competence. Identifying what is there and what is needed .

The following method has been adopted in order to conduct the current study and find answers to the proposed questions.

Questions of the study

The current study aims to find answers to the following questions:

1. How many technology-related courses are offered in translation departments in the Arab world?
2. To what extent is technology recognized in the program objectives in universities in the Arab world?
3. To what extent are technology-related courses reflected in the curricula of translator training programs?

Data collection

The main sources of data for the current research are:

1- A corpus of technology-related courses offered by MA translator training programs in the Arab world.
2- The goals and objectives of all MA translator training programs in the Arab world as reflected in their websites.
3- A corpus of all available course descriptions of technology-related courses available on translator training programs in the Arab world.

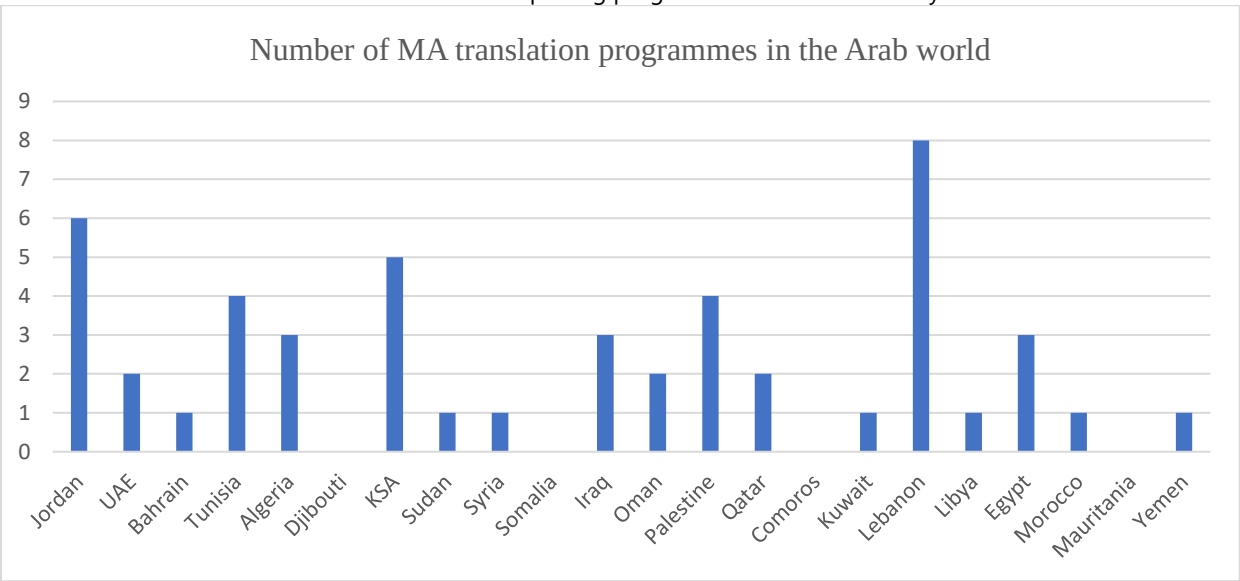
In order to compile the corpora necessary to answer the proposed questions. The researchers followed the following steps: First, the researchers identified all the state/public and private universities in the Arab world (about 700 universities) by referring to the Ministry of Higher Education official website for each country. To add credibility to the current paper, the researchers also performed Google search queries for universities in each country by using keywords such as 'universities in X country, MA programs in translation in X country'. Then, the researchers identified all the Universities that offer MA in translation and/or translation and English programs. Third, the researchers filtered technology-related courses offered by these programs and obtained all relevant data from each Master's program on its website. Fourth, all technology-related courses are classified further into obligatory and elective as they appear on the university website. Program objectives and course descriptions were also extracted from the university website.

Findings and Discussion

The researchers provide a comprehensive analysis of the obtained data (3 corpora) in order to provide a general view of the place of technology within translator training programs in the Arab world. More specifically, the analysis was carried out at three levels including, MA programs in Translation and Interpreting in the Arab World, Program Objectives, and Course Description.

MA programs in Translation and Interpreting in the Arab World

Figure 1. shows the number of MA translation and interpreting programs in each Arab country.



As explained in the previous section, the researchers identified all public and private universities in the Arab world (700) and then identified universities that offer MA programs in translation and interpreting as they appear on their websites. The results show that the total number of MA program specialized in translation and interpreting offered by universities in the Arab is (49) programs. (universities in the Arab world not Arab universities, because there are several European and American universities that have branches in the Arab world). Generally speaking, the total number of MA programs in translation and interpreting (49) comparing to the population of the Arab world (436.08 million inhabitants according to Statista) can be seen as a reasonable number.

Figure (1) shows that Djibouti, Somalia, Comoros, and Mauritania do not offer any MA program in translation and interpreting. The data set used in the current paper cannot suggest reasons for the absence of MA programs in these countries. However, we can attribute that to several reasons; the universities' priorities and the availability of qualified professors and appropriate infrastructure to establish such degrees. On the other side, Lebanon, Jordan, KSA, Palestine, and Tunisia host (23) MA programs in translation and interpreting.

Program Objectives

Program objectives are meant to inform prospective students about the results that they will achieve upon completing the degree. The purpose behind examining the objectives of the programs that offer MA in translation is to map the offered courses against the so-called 'technological competence'. In other words, this is to examine the position and status of technology as stated in the objectives of the department regardless of offering technology-related courses or not.

The courses offered by each program should reflect the objectives of the program. Thus, before analyzing the offered courses, it is crucial to examine the goals of the MA programs in translation in the Arab world. These objectives can be summarized under the following categories or competencies:

1. To develop students' language competence in both source and target
2. To develop students' cultural competence
3. To prepare students to pursue their graduate studies (PhD)
4. To develop students' transfer competence
5. To develop students' translation competence
6. To develop students' knowledge to translate texts from various domains
7. To provide students with the basic theoretical principles of translation
8. To develop students' competence in conducting translation research
9. To develop students' commitment to ethical consideration and conduct in the field of translation

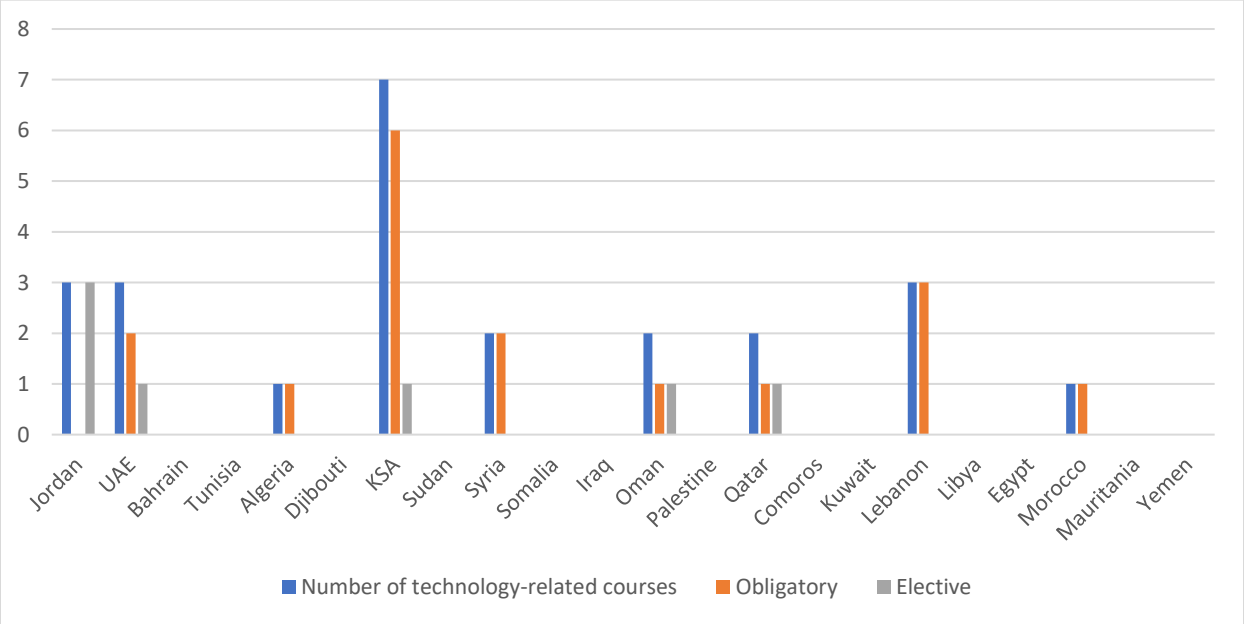
The absence of technology is also evident in the objectives of most of the MA programs in translation and interpreting in the Arab world. Translator training programs are expected to observe the critical developments in translation as an industry and thus modify their objectives and curricula accordingly. This does not mean that MA programs should cater to all possible jobs in the market. Yet, it seems that technology has become a crucial component of translator training programs all over the world.
A number of translation and interpreting MA programs in the Arab world, namely, *Saint Josef University Dubai/UAE*, *Hamad Bin Khalifa University/Qatar*, and *Saint Josef University of Beirut/Lebanon,* state clearly in the program objectives section that they focus on translation technologies. These departments further identify certain applications and skills, such as; editing and translation software applications, CAT tools, and localization software applications. Furthermore, these departments visibly highlight in their websites that they are certified by European well-recognized programs. For example, *Hamad Bin Khalifa University* announces that the department is renewed by the faculty of translation of *the University of Geneva*, while *Saint Josef University Dubai and Beirut* state that they 'have been granted the prestigious European label EMT'. Finally, it is crucial to mention that the Master of Translation Technologies at *Saudi Electronic University/KSA* clearly indicates that their program focuses on translation technologies which is absent in almost all MA translation programs in the Arab world. The program webpage says:

> The program of Translation Technologies is designed to prepare students of English language and Translation to become able to handle translation tasks benefiting from available digital technologies and applications. Having this unique training, the program fills a gap in the area, as there is no such a program in the gulf or the Arab world. (*Saudi Electronic University/KSA MA in Translation Technologies Homepage)*.

Technology-related courses

The literature review section shows that several scholars (Kiraly 2013; Pym 2013; Chan Sin-wai 2017; O'Brien and Rodriguez Vazquez 2020) consider technological competence as a core competence for translators. In order to shed light on the place of technology in translator training curricula in the Arab world; the current study provides detailed information about the nature of technology-related courses offered at the universities identified in figure (1). Such courses include CAT tools, localization, software localization, terminology studies, video game localization, and machine translation. Moreover, the current study classifies the technology-related courses into compulsory or elective as they appear in the study plan of each department. Identifying both the number of courses offered and their type (compulsory or elective) can further help in understanding the place and focus on technology in each university plan. Figure 2. Below provides a description of these facts.

Figure 2. Number and type of technology-related courses offered at translation and interpreting programs in the universities in the Arab world.



The total number of technology-related courses is (24) course; (17) of these courses are obligatory, whereas (7) are electives offered in 9 Arab countries. These numbers clearly show that the focus on technology is not satisfactory and one can also go further and claim that technology is neglected in the curricula of MA programs in universities in the Arab. The distribution of these courses is as follows:

Table 2. Course titles of technology-related courses in MA programs in the Arab World

Course title	Number of courses
Computer Assisted Translation (CAT tools)	5
Machine translation	7
Translation technology	7
Software localization	1
Website localization	2
Advanced Localization	1
Localization	1

19 technology-related courses (CAT tools, Machine translation, and translation technology) can be seen as general and not specialized courses specifically at the MA level. That is to say, BA programs in translation and interpreting offer CAT tools courses and thus re-offering such course at the MA level might not be effective. Anyhow, more details will be provided in the course description sub-section about the nature of these courses. Time and again, the number of offered technology-relate courses compared to the number of MA programs in translation in universities in the Arab world clearly suggests that focus on technology at the MA level is far from the number of courses offered by various well-recognized and established programs such as the EMT.

Moreover, only three universities, *Saudi Electronic University/KSA*, *Saint Joseph University Beirut/Lebanon*, and *Saint Joseph University/UAE,* offer localization courses. Furthermore, none of the MA programs in the Arab world offer courses in video game localization. This can be considered as another example and evidence of the urgent need to reevaluate the position of technology in the MA translation and interpreting programs in universities in the Arab world. In this context, it is crucial to mention that video game localization, as an industry, is gaining recognition in the curricula of various MA programs in Europe and The USA. Moreover, several scholars have made significant progress in proposing specialized pedagogical approaches to teaching video game localization. Recognition of video game localization in the curricula of MA programs in translation came as a result of the significant growth in the video game industry and the need for competent localizers (Esqueda & Stupiello2018; Esqueda 2020; Odacıoğlu, Köktürk, & Uysal 2016; Shen, Huijia 2022).

Course Description

A Course description usually provides a summary of the learning experience for any given course. Moreover, a course description presents details about the course such as course title/name and number, prerequisites, topics covered in the course, semester offered, registration information, etc. What matters in this paper is trying to get more information about the nature of the topics covered in the technology-related courses offered in the MA programs in the Arab world. Meanwhile, the current research tries to figure out whether course names match what these courses actually cover. While collecting the data of the current paper, the researchers observed that a number of courses are labeled or named as 'Machine translation' and, at the same time, the course description of these courses says that it covers different topics such as CAT tools.

Computer Assisted Translation (CAT tools)

It seems that all the MA programs that offer this course have a clear picture and a united opinion about what is taught or should be taught in this course. In general, the course description of the CAT tools courses says that the course covers various topics related to CAT tools such as translation management systems (TMs), terminology management systems, alignment and term extraction tools, and quality assurance features both theoretically and practically. These skills are offered in a number of MA programs, such as *Sultan Qaboos University/Oman*, within a course entitled Translation skills and Translation Technology.

Machine translation

Examining the course description of machine translation modules offered in the MA programs reveals serious disparities. For example, the course description of MT modules at both the *University of Jordan/Jordan* and *Petra University/Jordan* (course title machine translation) does not mention post-editing. They only focus on training students on how to benefit from and use applications of MT in addition to the theoretical part and the developments that MT has witnessed i.e., the history and application of machine translation. On the other hand, some other universities such as *Sultan Qaboos University/Oman* pay considerable attention to pre-editing and post-editing techniques practically in addition to MT history and theoretical part. Interestingly, the *University of Sharjah/ UAE* Master of Arts in Translation suggests a different name: Machine-aided translation, below is the course description for this course.

> This course provides an overview of the use of computers in translation and the practical and theoretical problems encountered. Central issues include machine translation and its limitations, machine-aided translation, terminology banks, translator workstations, online dictionaries, and language corpora.

The above-mentioned course description combines both CAT tools and machine translation in addition to other tools such as language corpora. The course description seems to be general and not focused as it might be hard to cover all the aspects mentioned in the description.

Translation technology

A number of universities offer modules under the title of 'translation technologies' in which they mainly introduce CAT tools such as *Hamad bin Khalifa University/Qatar* and *Sultan Qaboos University/Oman*.

Localization

Generally speaking, Localization can be defined as the "process of modifying products or services to account for differences in a distinct market", a definition provided by the (now defunct) Localization Industry Standards Association (LISA). The process of localization involves more than textual transfer from one language to another to include both cultural and technical aspects in order to meet the expectations of the target users (Jimenez-Crespo 2011; Dunne 2006; Esselink 2000). Furthermore, several scholars conducted research on aspects related to curricula design, teaching and assessment methods, and activities that can be introduced to students (Carme Mangiron 2018; Esqueda 2020; Austermühl 2006). When it comes to the case of MA translation programs in the Arab world; the data collected show that only 5 courses are offered in all the MA programs in the Arab world (Software Localization 1, Website Localization 2, Advanced Localization 1, and Localization 1) at only three universities *Saudi electronic university/ KSA* and *Saint Joseph University/Lebanon*, and *Saint Joseph University/UAE*. Only the Master of Translation Technologies at *Saudi Electronic University/ KSA* provides course descriptions for all the courses they offer. In other words, the researchers in the current study were only able to access the localization course description at the Master of Translation Technologies at *Saudi Electronic University/ KSA*. These courses are Software localization and advanced Localization. On the other hand, the course description for the Software localization courses says that the course teaches students how to localize websites using a variety of localization tools. On the other hand, the advanced Localization course description explains that the course introduces students to localizing products namely mobile apps, and also introduces students to a number of translation management systems (TMS).

MA in Audiovisual translation

Two universities in the Arab world offer specialized programs in audiovisual translation; *Applied Scientific Private University/Jordan* and *Hamad bin Khalifa university/Qatar*. Both programs focus on Audiovisual translation and mainly on dubbing, subtitling, and voicing. Moreover, both programs highlight that they have specialized laboratories equipped with advanced software. Surprisingly, the Master's program in Audio-Visual and Mass Media Translation at *Applied Scientific Private University/Jordan* does not offer courses on other translation technologies i.e., CAT tools, MT, and localization. On the other hand, the Master of Arts in Audiovisual Translation at *Hamad bin Khalifa University/Qatar* offers only one course specialized in translation technologies within the elective courses set. The structure of these two programs suggests that students might graduate with high technical skills within the context of audiovisual translation as they are trained to deal with audiovisual text linguistically, culturally, and technically. That is to say, technological issues related to audiovisual translation, as seen in the course offered and program description, are well dealt with. At the same time, other technological skills are not.

Where is the gap

Apparently, there exists a gap regarding teaching translation technology in the Arab world. It is crucial to identify the reasons contributing to this gap. As discussed, the rapid and unprecedented technological developments necessitate that translator training programs equip students with the necessary technological competence and prepare them to meet the demands of the market. Identifying potential reasons might go beyond the fact that 'technological competence' became a prerequisite for translators to compete in local, regional, and international markets (see, Batinehand Bilali 2017, Sayaheen 2019). Consequently, if we can safely assume that 'technological competence' is crucial for translators, then other potential reasons for ignoring technology-related courses can be attributed to understanding the importance of technology, the existence of suitable infrastructure, and the lack of qualified instructors. A more serious reason might be the resistance to change some professors and decision-makers hold regarding the importance of including technology in translator training programs. A tendency that has changed in many countries is the impact of industry toward the need for technology. For example, Bowker and Marshman (2009) state 'The need for technologies in the translation industry has clearly affected translator education in Canada' (p. 69). Moreover, they identified several factors that make teaching technologies challenging including, financial and time restrictions. Again, except for the Gulf countries (UAE, Bahrain, KSA, Kuwait, Qatar, and Oman) financial aspects might constitute a challenge for universities interested in including technology in their curricula. Establishing laboratories equipped with advanced computers in addition to purchasing, for example CAT tool licenses, might be costly for universities in countries such as Jordan, Yemen, Syria, and Palestine. Here, it is crucial to mention that a number of companies have free education licenses for universities through their Academic programs such as MemoQ

Conclusion

The current paper aims to achieve the following objectives: first, to identify the place of technology in translator training programs in the Arab World. Second, to provide decision-makers and translator training programs with possible modifications and suggestions to include or not to include technology-related courses in their curricula. Third, to give recommendations for programs that plan to start new MA programs. Finally, it provides recommendations for decision-makers and translator training programs about the needed skills or qualifications.

There is a general consensus among translation scholars about the importance of technological competence for translators in several parts of the world. Moreover, the inclusion of technology-related courses in translation MA program curricula seems to be a well-established practice in Europe. This inclusion came as a result of both responding to the technological developments and equipping translators with the needed technological skills to become professional translators and compete in the 'modern or digitalized' translation market. Translation programs tailor their curricula to develop 'technological competence' for example EMT model (2012) and the EMT revised model of translator competence profile (2017) both include 'technological competence' as a major competence for students. The data of the current research is based on what is available on the Web: programs, objectives, courses offered, and course descriptions. The analysis of the available data shows that translation programs in the Arab world are still far from similar programs in other parts of the world such as Europe, except for four programs (*Saint Josef University Dubai and Beirut*, *Hamad Bin Khalifa*/Qatar, and *Saudi Electronic university/ Saudi Arabia*). Consequently, MA programs in the Arab world are strongly invited to reconsider their curricula if they wish to keep pace with the drastic changes that affected the nature of translators' work. Finally, it is recommended to conduct other research to identify approaches to teaching technology courses, tools taught, assessment methods, teachers profiles, and IT infrastructure. It is hoped that the findings of the current research serve as a reference for decision-makers in the MA translation programs in the Arab world to reconsider the place of technology in their curricula.

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