The Impact of Using Memsource Termbase System on Developing Terminological Competence for Saudi Freelance Technical Translators

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Abstract
The current qualitative study aimed at assessing the impact of using the Memsource termbase system on developing terminological competence for 10 Saudi freelance technical translators registered in the Saudi freelance platform Bahr and the two social media websites Twitter and Telegram. As Arabic specialized translations often contain inconsistent and inaccurate use of terminology, this study focused on developing terminological competence using the terminology tool. To assess the impact of the terminology tool on the participants’ terminological competence, the participants in this study were divided into two groups: one group was assisted with the terminology tool—referred to as tool-assisted—and the other was not—referred to as non-tool-assisted. Both groups completed a translation task and an open-ended questionnaire. As developing terminological competence assists in dealing with terms effectively, the terminology tool used by the participants in this study allowed the participants to create their termbases before translating the assigned technical text. These termbases were then incorporated into the tool, and when the participants started translating the text, the tool suggested the previously translated terms. To analyze the obtained data, descriptive content analysis and thematic analysis were used: the former was used to analyze the translations, and the latter was used to analyze the questionnaires’ responses. The study concluded that the terminology tool assisted in developing the tool-assisted participants’ terminological competence regarding identifying terms, creating term bases, and managing terminology during the translation process.

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Abstract

The current qualitative study aimed at assessing the impact of using the Memsource termbase system on developing terminological competence for 10 Saudi freelance technical translators registered in the Saudi freelance platform Bahr and the two social media websites Twitter and Telegram. As Arabic specialized translations often contain inconsistent and inaccurate use of terminology, this study focused on developing terminological competence using the terminology tool. To assess the impact of the terminology tool on the participants’ terminological competence, the participants in this study were divided into two groups: one group was assisted with the terminology tool—referred to as tool-assisted—and the other was not—referred to as non-tool-assisted. Both groups completed a translation task and an open-ended questionnaire. As developing terminological competence assists in dealing with terms effectively, the terminology tool used by the participants in this study allowed the participants to create their termbases before translating the assigned technical text. These termbases were then incorporated into the tool, and when the participants started translating the text, the tool suggested the previously translated terms. To analyze the obtained data, descriptive content analysis and thematic analysis were used: the former was used to analyze the translations and the latter was used to analyze the questionnaires’ responses. The study concluded that the terminology tool assisted in developing the tool-assisted participants’ terminological competence regarding identifying terms, creating termbases, and managing terminology during the translation process.

Keywords: Terminological competence, Memsource termbase system, Saudi freelance translators, Arabic technical translation
المستخلص البحث

يسعى الباحث في هذا البحث النوعي لدراسة إسهام أداة إدارة المصطلحات Memsource termbase system في تحسين الكفاءة المصطلحية لعشرة مترجمين سعوديين تقنيين مستقلين في منصة بحر للعمل الحر ومنصتي التواصل الاجتماعي تويتر وتلغرام. تُظهر الترجمات العربية المتخصصة اضطراباً مصطلحيًا واضحًا، إذ يُترجم المفهوم العلمي الواحد بعدة مصطلحات، متجأ ترجمة غير واضحة. وحتى يضبط المترجم ترجمة المصطلحات ترجمة دقيقة ويستعمل مصطلح واحد لكل مفهوم علمي، يُتقد الباحث أداة إدارة المصطلحات ليقيس أثرها في تحسين كفاءة المترجم المصطلحية من خلال تقسيم المشاركين العشرة قسمين، قسم يُترجم النص التقني الإنجليزي إلى العربية باستعمال الأداة، والآخر يُترجم بدونها؛ بغية تحسين أثر الأداة في ترجمة النص الأول الذي استعملها. ثم بعدًا يُجيب المشاركين العشرة عن الاستبانة. تتحلى كفاءة المترجم المصطلحية في توثيق المصطلحات المتخصصة وتوفيقاً يمكن من استعمالها في ترجمة النصوص المتخصصة وينتج ترجمة دقيقة ذات دلالة مضبوطة، ولذا يوثر النص الأول من المشاركين المصطلحات التقنية في النص في قاعدة المصطلحات في الأداة مع ترجمتها للعربية، وهذا قبل عملية الترجمة، ثم تخزن الأداة قاعدة المصطلحات التي أنشأها المشاركون وتساعدها في عملية الترجمة، وهنا عند بدء المشاركة الترجمة، تتيح الأداة بوجود ترجمة للمصطلح الذي يترجم، فتضعيد استعمال المصطلحات وتعين في ترجمة كل مفهوم بمصطلح واحد. ومن أجل تحليل بيانات البحث يتم استخدام الابحاث لمفهوم لتحليل المحتوى النوعي لتحل ترجمة المشاركون والتحليل الموضوعي لتحليل إجابات المشاركين عن أسئلة الاستبانة، ويفهم الباحث بذكر إسهام الأداة في تسنين كفاءة المترجم المصطلحية ممن استعملوها وذلك بتعريفهم للمصطلحات المستخدمة وضبطها في قاعدة المصطلحات وضبط استعمالها في عملية الترجمة.

الكلمات المفتاحية: الكفاءة المصطلحية، أداة إدارة المصطلحات، الترجمة التقنية إلى العربية
The Impact of Using Memsource Termbase System on Developing Terminological Competence for Saudi Freelance Technical Translators

Study Background

Terminology has been a necessary tool for communication. Due to various developments in different fields of knowledge, scholars in many contexts required rules for formulating terms and, consequently, agreement on the usage of terms, giving rise to the practice of terminology (Rey, 1995, as cited in Cabré, 1999). The notion of terminology, therefore, refers to (1) the practice of collecting, defining, and distributing terms, (2) the theory of terminology, and (3) the specialized language of a field of knowledge (Sager, 1990, as cited in Kageura, 2015). This study is concerned with the first and third meanings of the concept of terminology: the practice of collecting, defining, and distributing terms by Saudi freelance technical translators to create termbases and the technical language that these translators deal with in the process of translating a technical text into Arabic.

Due to its importance in facilitating communication, terminology is essential in various fields of knowledge, including translation. Translating a text from one language into another involves finding correct terminological equivalents for the terms translated; therefore, translators have been developing and managing their terminological resources to use in translating current texts and reuse them in future translations (Bowker, 2015). In addition, terminology is particularly vital in technical translation where the specialized language used needs careful attention and precise and concise rendition (Cabré, 1999).

Since technical translators require specific skills to render technical texts effectively, the notion of translation competence is of relative importance. Translation competence and translation competence acquisition were studied by various scholars, including Bell (1991), Kiraly (1995), and Chesterman (1997), proposing that translation competence encompasses knowledge of the languages, the cultures involved, and domain-specific knowledge, and
highlighting that its acquisition follows a cyclical pattern, requires gradual improvements, and involves various stages (as cited in PACTE, 2020).

These scholars, yet, did not observe translation competence and translation competence acquisition empirically (PACTE, 2020). As a result, the model that the PACTE group (2003) proposed for translation competence is of great importance. This model combines five sub-competencies: bilingual sub-competence, extralinguistic sub-competence, knowledge of translation sub-competence, instrumental sub-competence, and strategic sub-competence. As they proposed an empirical approach to translation competence, the PACTE group (2003) translation competence model is used in this study to observe and assess the impact of using the terminology management tool suggested, hence the Memsource termbase system, on developing Saudi freelance technical translators’ terminological competence. For this reason, this study situates terminological competence within the extralinguistic, instrumental, and strategic sub-competencies in the PACTE (2003) model, as Toro and Fernández-Silva (2021) proposed. This is because the extralinguistic sub-competence deals with field-specific knowledge where specialized terminology is emphasized, the instrumental sub-competence is concerned with using documentation resources and the tools that information and communication technologies offer, emphasizing that the effective use of terminological resources and terminology management tools is essential to producing consistent, accurate specialized translations, and the strategic sub-competence highlights the role of the translator as a project manager, managing their terminology and solving terminology-related issues.

Terminological competence, thus, emphasizes that terminology management is important in facilitating the translation of specialized texts and solving terminology-related issues, such as the issue of inconsistency. Here, terminology management can be described as information management, which is, according to Galinski and Budin (1993), a practice
concerned with “structuring, storing, exchanging, disseminating, and using terminological information for text production” (p. 209).

**Research Problem**

The terminology situation in the Arab world seems to be difficult. The standardization issue of Arabic terminology that belongs to specialized fields and the terminological techniques used to manage Arabic specialized terms require more attention (Darir et al., 2019). In other words, the unstandardized use of Arabic terminology in specialized fields causes miscommunication and misunderstanding, and, therefore, is misleading. According to Darir et al. (2019), “Terminology standardization in Arabic is… far from complete and justifies further methodological investigation” (p. 32). The problem of inconsistency, as a result, is observed in Arabic technical texts (translations specifically): “All studies on Arabic scientific and technical terminology emphasize terminological anarchy” (Hamzé, 2019, p. 68). Here, terminology management tools can aid Arab technical translators in developing their terminological competence, which, in turn, can resolve the issue of unstandardized use of Arabic terminology in Arabic technical translations. These tools assist in the process of identifying, storing, and retrieving technical terms, finding appropriate terminological equivalents of technical terms, creating terminological resources that can be used and shared by different technical translators, and producing consistent translations that promote the standardization of Arabic technical terminology.

**Research Purpose**

The purpose of this qualitative study is to observe and assess the impact of using the Memsource termbase system, which is a terminology management tool, on developing terminological competence for 10 Saudi freelance technical translators who provide their translation services via the Saudi freelance platform Bahr and the two social media websites Twitter and Telegram. Terminological competence, in this paper, refers to the translator’s
skill in producing consistent translations, that is, clear, concise, and standardized renditions of technical terms, and highlights the effective use of the terminology management tool (the Memsource termbase system) in which the translators create their termbases to use during the translation process.

Due to its features, the studied terminology management tool, the Memsource termbase system, is selected to observe and assess the development of terminological competence for Saudi freelance technical translators. Memsource termbase system is a cloud-based terminology management tool, and compared to other terminology management tools, it is user-friendly, that is, translators can use it with no experience/training in computer-assisted translation tools. In addition, it is suitable for small-to-medium-sized translation projects, which makes it ideal for the assigned translation task, namely an English technical text (142 words) to translate into Arabic.

The technical text that the researcher selected is an English text provided by a professional Saudi technical translator, in which it meets the characteristics of technical texts: it contains neologisms, which refer to existing words that have created new meanings or new words and expressions, long sentences, and frequent use of nominalization and the passive voice (Herman, 1993).

The 10 Saudi freelance technical translators recruited from the Saudi freelance platform Bahr and the two social media websites Twitter and Telegram are first divided into two groups of five: a tool-assisted group and a non-tool-assisted group. The tool-assisted group is then required to translate the selected technical text (into Arabic) using the Memsource termbase system, while the non-tool-assisted group translates the text without using the tool. After that, the researcher asks the two groups to complete an open-ended questionnaire to gain further insights into the tool’s impact on the translations by the tool-assisted, the translation of the text by the non-tool-assisted, the challenges that both groups
encounter when translating Arabic technical texts and reading Arabic technical translations, and the quality of Arabic technical translations. Finally, the researcher is enabled to assess the impact of the Memsource termbase system on developing the selected Saudi freelance technical translators’ terminological competence and discover the role that technology could have in producing accurate, consistent Arabic technical translations.

**Significance of the Study**

The inconsistency issue of Arabic terminology found in Arabic translations of specialized texts causes confusion, misunderstanding, miscommunication, and conflict (Darir et al., 2019 and Chatrat, 2019). As one type of specialized texts, technical texts deal with a wide range of topics, and they require accurate, precise rendition into Arabic. Introducing the Memsource termbase system to Saudi freelance technical translators can enable them to identify, store, and retrieve English technical terms and their Arabic equivalents. This process of creating termbases before translating the text can facilitate the translation phase, ensure correct and consistent renditions of the technical terms in the text, develop the translators’ terminological competence, that is, their skill in dealing with specialized terms effectively, managing their terminology via the terminology tool, and producing accurate and consistent translations. Since previous literature did not focus on the impact of using terminology management tools on developing terminological competence for Saudi technical translators, this study observes and assesses the impact of using the Memsource termbase system on cultivating terminological competence for Saudi freelance technical translators. In addition, this study can provide new insights into the development of translation competence, in general, and terminological competence, in particular, in an Arabic context and the impact of translation technologies on specialized translation and translation competence.
Contributions of the Research

The issue of standardizing Arabic terminology within specialized fields is related to the fact that many foreign terms are introduced into Arabic constantly and, therefore, require translation. According to Darir et al. (2019), Arabic translators encourage “the proliferation of synonymous terms in Arabic” (p. 32). In other words, translating terms into Arabic requires finding the appropriate equivalent of the term, and Arabic translators here either (1) translate the term into an existing term or (2) create a new term because an equivalent does not exist or is not accepted or agreed upon, which causes polysemy (Darir et al., 2019). To overcome this issue, this study assesses the impact of using the Memsource termbase system, which is a terminology management tool, on developing terminological competence for Saudi freelance technical translators. Developing Arab translators’ terminological competence, as a result, can enable them to maintain consistency in their translations and, consequently, produce optimal translations, promoting standardized use of Arabic terminology.

Research Questions

This study aims to answer the following questions:

1. How does using the Memsource termbase system impact Saudi freelance technical translators’ terminological competence?

2. How does using the Memsource termbase system to develop terminological competence for Saudi freelance technical translators assessed?

Limitations of the Study

Since this study assesses the impact of using the Memsource termbase system on developing terminological competence for the Saudi freelance technical translators registered in the Saudi freelance platform Bahr and the two social media websites Twitter and Telegram, other translation competencies, namely the sub-competencies highlighted in PACTE (2003), are not considered. Also, other terminology management tools or a
combination of such tools could yield more comprehensive results; however, as the time allocated for this research project is limited, the data collected and the sample size are affected. The data is collected through the following: a translation task where the participants translate an English technical text into Arabic and an open-ended questionnaire to be completed after the translation task. Here, translating more than one English technical text could provide more conclusive results, but the technical text (to be translated) is selected as it has the characteristics of technical texts. Furthermore, the sample size is small: 10 Saudi freelance technical translators are recruited from the Saudi freelance platform Bahr and the two social media websites Twitter and Telegram to participate in this study.
**Literature Review**

There were several studies discussing the role of terminology in developing translation quality. Chatrat (2019) investigated the impact of terminology and documentation on the translation quality of the specialized text. The researcher here analyzed the Arabic translations of three French specialized texts to highlight the terminology anarchy in Arabic and the absence of terminology documentation and their effects on the quality of the translations. The researcher suggested that Arab translators use existing terms, encouraged Arabic translation institutions, Arabic language academies, and Arab translators to standardize specialized terms that are introduced into Arabic from different languages, and highlighted the role of Arab terminologists in aiding translators to produce accurate, consistent translations.

In addition, the importance of developing translators’ terminological competence was highlighted in a number of studies. Liu (2019) reflected on the translation of the English article “Well-positioned Seismic Measurements” into Chinese in the scientific journal “Oilfield Review” and discussed, from his experience, how translators can cultivate their terminological competence. The researcher suggested that for translators to be terminologically competent, they first require developing terminological consciousness (responsibility towards terminology), which is raised through education, especially terminology education, and then comes translators’ terminological skills and knowledge. The researcher emphasized that this complex, practical competence is composed of various sub-competencies, including theoretical, thematic, and technical sub-competencies. The researcher then concluded that “term management in translating the professional texts is very important for the cultivation of translators’ terminological competence” (Liu, 2019, p. 17), which highlights the role of terminology management in developing specialized translators’ terminological competence.
Inspired by the fact that student translators need to improve their translation knowledge and skills, Cheng (2019) assessed student translators’ translation competence by adopting a process-oriented approach. The researcher in this study conducted a longitudinal study with six MA translation students at the University of Manchester to observe their problem-solving abilities while translating an English-Chinese text, in which the researcher introduced a problem-solving perspective to view the development of translation competence as part of the translation process. Concentrating on the interrelation between the components of translation competence and the development of this competence in the translation process, the researcher, through task-based interviews, questionnaires, and a focus group, concluded that the development of translation competence is inconsistent, unbalanced (does not develop in parallel), and differs from one participant to another. The study, thus, emphasized the importance of observing the development of translation competence during the translation process. The problem-solving perspective, as a result, indicated that translators’ problem-solving abilities are essential to the development of translation competence.

Furthermore, Fernández-Silva and Cañete (2020) conducted their research on the development of specialized documentation competence for English-Spanish translation students throughout their university training. Using thematic and terminological documentation tasks carried out by 16 translation students, the researchers aimed to measure the competencies involved in thematic and terminological documentation. Since their research included beginner, intermediate, and advanced translation students, the researchers concluded that advanced students were more competent compared to the other two groups (beginner and intermediate students) in using specialized dictionaries, search engines and databases, and field-specific terminology, highlighting that developing novice or beginner translation students’ translation competence, generally, and terminological competence, particularly, requires more attention.
The PACTE model of translation competence (2003) which was relied on in PACTE (2020) to study translation competence acquisition is of particular importance. The PACTE model (2003) of translation competence contained bilingual sub-competence, extralinguistic sub-competence, knowledge of translation sub-competence, instrumental sub-competence, strategic sub-competence, and psycho-physiological components. To experiment with translation competence acquisition, the researchers in PACTE (2020) involved 129 translation students and recent graduates: these participants were asked to translate into their first languages (Spanish and Catalan), their second languages (English, French, and German), and answer two questionnaires about the translation problems that they encountered while translating. The researchers here hypothesized that translation competence acquisition is a dynamic process, its components develop differently (not in parallel), and some of its components, hence knowledge of translation, instrumental, and strategic sub-competencies, are fundamental to the translation competence acquisition process. Despite the fact that it proposed an empirical approach to translation competence acquisition, this study did not address translation competence acquisition with regard to specialized translations: “Our research on translation competence acquisition focused on non-specialized translation” (PACTE, 2020, p. 105).

Referring to translators and the terminological work that they carry out during translation, Álvarez and Umaña (2020) discussed translators’ levels of involvement in terminology practice. In their study, the researchers aimed to compare the way professional and trainee translators deal with terminology work during translation. These levels of involvement, according to Cabré (1999), are four: the first level refers to the translator consulting dictionaries and terminological databases to find an equivalent to a complex term and using explanations when an equivalent does not exist (a passive role), the second level explains translators’ role in introducing new terms in the target language, demonstrating their
lexical rather than terminological competence, the third level concerns translators being aware of the specialized field that they are translating into, in which they employ this knowledge while translating and compile a database to refer to when they translate similar texts, and the fourth level involves the effective use of terminological databases that the translator has created where editing is performed to improve the databases to be used by other translators who translate within the same field. To describe translators’ levels of involvement in terminology, the researchers enrolled three professional translators and three trainee translators, designed a translation task that involved three different specialized texts to translate from English to Spanish, and used structured and semi-structured interviews. The researchers, then, concluded that both trainee and professional translators performed within the first level of involvement: they consulted dictionaries and terminology databases; however, they neither introduced new terms nor created their terminology database. This suggests that terminological competence is required by novice and professional translators to translate specialized texts accurately and consistently.

Alenezi’s (2020) study on developing student translators’ translation competence through a task-based approach is of great significance. Here, the researcher conducted a case study on the development of translation competence, in which he implemented a task-based approach to teach translation to 39 Arabic student translators at their first level in a translation program. To examine all translation sub-competencies, especially bilingual sub-competence, the researcher divided students into groups, selected various English texts in different fields to be translated into Arabic, and provided students with assistance and feedback during translation tasks, including terminological resources and translation techniques. The researcher concluded that through the analysis of their final translations, the students’ translation competence has developed, namely their bilingual competence, which refers to the student’s ability to use their knowledge of the languages involved, hence English
and Arabic, to understand the texts to be translated. This study, yet, did not introduce terminology management tools into the translation process, especially the translation of the specialized texts that were assigned to the students.

Moreover, Asiri and Metwally (2020) investigated the impact of translation students’ linguistic and cultural competencies on translation quality. By presenting some sample mistakes of Arabic-English-Arabic translations of 136 advanced translation students at King Khalid University, the researchers first proposed pedagogical solutions to the students’ mistakes, encouraging instructors to develop them as well. After that, the researchers examined how the translation students’ linguistic and cultural competencies can affect their translation quality. Here, the student translators were asked to translate a literary text (into Arabic) individually, a literary passage (into English) in groups, and a non-literary text (into Arabic) individually. Observing the students’ translations, the researchers found that linguistic and cultural competencies are interrelated: students who made linguistic mistakes tend to make cultural mistakes as failing to render the linguistic component also means failing to render the cultural component. As a result, the researchers stressed the significance of developing Saudi student translators’ translation competence, including the effective use of dictionaries and different resources to improve their translation quality.

Moving to analyze the translation curriculum at two Arab universities, Mohammed (2020) presented an analysis of the translation program at the University of Science and Technology and Al-Saeed University in Yemen to view to what extent the program assists translation students in solving the translation problems they encounter when translating texts from Arabic into English. The researcher here used questionnaires with sixty translation students to examine their attitudes toward the translation program at their universities, in which their answers were analyzed based on the model that the PACTE group (2003) proposed for translation competence. The researcher concluded that the translation students
were dissatisfied with the translation program at their universities, believing that it does not assist them in improving their translation skills. Also, the researcher found that bilingual, extralinguistic, bi-cultural, and knowledge about translation sub-competencies need more attention as they are not adequately addressed in the current syllabus.

Student translators’ technological competence was as well given attention by translation scholars. Tarasenko and Amelina (2020) discussed the issue of improving student translators’ technological training by implementing innovative improvements to the current translation and simultaneous interpreting courses/modules at the National University of Life and Environmental Sciences in Ukraine. These innovative improvements comprise unifying the approaches to studying key operations of terminology resources management in computer-assisted translation (CAT) and computer-assisted interpreting (CAI) systems, namely InterpretBank, Memsource, and SDL Trados. With the participation of 33 student translators, the researchers conducted a survey to measure the students’ perceptions of the improvements, especially the parallel use of CAT and CAI systems to manage terminology. Consequently, the researchers noted that the student translators perceived the innovative elements positively and were able to comprehend the use of the automated translation systems studied, in which they were encouraged to use these systems effectively, especially concerning terminology work.

The concept of terminological competence in relation to specialized translation and terminology management tools was studied by Toro and Fernández-Silva (2021). In their study, the researchers situated terminological competence in specialized translation within the translation competence model proposed by the PACTE group (2003), suggesting a definition of this competence as composing six abilities and skills and measuring terminological competence through two instruments: a translation task and semi-structured interviews. Here, the researchers concentrated on measuring terminological competence according to the
definition that they proposed (the abilities and skills), and their participants included five advanced, English-Spanish translation students. The researchers, however, stated that “the results showed that the participants are not familiar with the extraction and terminology management tools” (p. 22), indicating the importance of developing terminological competence for these specialized translation students, in particular, and for specialized translators, in general.

As providing a comprehensive review of translation competence and its models is necessary, Salamah (2021) reviewed the concept of translation competence and its models and addressed translator training within the Saudi context, emphasizing that more research is required in this area. By referring to previous literature in the field of Arab translators’ training, the researcher explained that there is a lack of training for Arab translators concerning translation competencies, such as project management, and instrumental and subject-area competencies (which are required the most based on job descriptions) received little attention in Arab translators’ training (as cited in Salamah, 2021). This indicates that more studies focusing on developing Saudi translators’ translation competence are needed, especially to highlight the role that translation technologies could have in developing translation competence.

In addition to the studies on student translators’ translation competence, the researcher Al-Jarf (2022), in “Challenges That Undergraduate Student Translators Face in Translating Polysemes from English to Arabic and Arabic to English” discussed the concept of polysemy and the difficulties it presented through analyzing selected translated texts (from English into Arabic and vice versa) by Arabic advanced student translators. The researcher stated that “[students] tend to overgeneralize the equivalent they know to all contexts…, not the one suitable for a particular context/domain…” (p. 93). This study, thus, illustrated the importance of competence in translation, revealing that the students in the study show
inadequate competence in Arabic and English and a lack of background knowledge in the area into which they translated. In addition, it emphasized the importance of managing terminology, especially the terminology of a specialized field, to overcome the issue of polysemy in Arabic translations and to deliver concise, correct translations.

The previous studies highlighted the importance of developing student translators’ terminological competence, especially in relation to specialized translation. They also stressed the need to study translation competence, in general, and terminological competence, in particular, in a Saudi context as there are a few studies that observe and assess Saudi translators’ translation competence. In addition, the practice of terminology management in relation to the development of terminological competence in specialized translation and the role that terminological competence plays in translating specialized texts accurately were emphasized in some of the aforementioned studies in a university/classroom setting. These studies, nevertheless, did not address the impact of using terminology management tools on developing novice and professional technical translators’ terminological competence, particularly concerning Saudi freelance technical translators. Therefore, this study aims to assess the impact of using the Memsource termbase system, which is a terminology management tool, on developing terminological competence for Saudi freelance technical translators who provide their translation services in the Saudi freelance platform Bahr and the two social media websites Twitter and Telegram.
Method

Data Collection

The current study is both process- and product-oriented. As qualitative research focuses on the process and the product (Creswell, 2014), this study looks into the process of developing the participants’ terminological competence, in addition to the product, hence the translations that these participants delivered through the use of the Memsource termbase system. To achieve this, the study employed an experimental, qualitative method to assess the impact of using the Memsource termbase system on developing terminological competence for Saudi freelance technical translators. And to obtain a random selection of the sample, five different freelance platforms and social media websites were selected: Bahr, Mostaql, Munjiz, Twitter, and Telegram. However, as the two freelance platforms Mostaql and Munjiz only post paid projects, it was not possible to recruit participants from these two platforms. As a result, the participants in this study were recruited from the Saudi freelance platform Bahr and the two social media websites Twitter and Telegram: translators were asked to participate in a research project via a post in Bahr, a tweet in Twitter, and a message in Telegram—the message was sent to three different freelance translator groups. Because the selection criteria for the participants did not specify age, gender, level of education, or experience, 10 Saudi freelance technical translators from both genders were selected and provided with an informed consent form (written in Arabic and English) that includes the target population, a description of the study, any possible risks or costs, how data is used and stored and asks for their approval to participate. In this regard, the consent form, in addition to the study’s proposal, was reviewed and approved by the Saudi Electronic University’s Research Ethics Committee on March 22nd, 2023.
To assess the impact of the tool on the participants’ terminological competence, the 10 participants were divided randomly into two groups of five: one group was assisted with the Memsource termbase system and the other was not assisted with the terminology tool—during recruiting translators, the recruited translators were assigned to the two groups randomly: the first two translators were non-tool-assisted, the second two translators were tool-assisted, the third two translators were non-too-assisted. This process of assigning translators to the two groups continued until the last two translators who were non-tool-assisted. The study then proceeded in two stages. In the first stage, both groups were asked to translate an English technical text (142 words) that describes a medical device patent into Arabic. It is worth mentioning here that the technical text was provided by an experienced English-Arabic technical translator, offering these translators a real translation experience. The technical text is purposefully selected short so the participants can complete it (long texts may be difficult to complete for participants; they may not be willing to translate long texts voluntarily). For the tool-assisted group, the five participants were provided with an instructional video on how to use the Memsource termbase system, in which their task was 1. Create their termbases by extracting the terms in the text and entering them in the termbase in the tool with their Arabic equivalents and 2. Translate the text using the termbase that they created (see Figure 1)—that is, while the participants translate, the termbase (the section on the right in Figure 1) suggests the translations of the terms previously translated (the highlighted terms on the left in Figure 1), ensuring that each term is translated consistently throughout the text. For the non-tool-assisted group, on the other hand, the five participants translated the text without the use of the tool.
In the second stage, both groups completed an open-ended questionnaire of four questions to further measure the tool’s impact on the tool-assisted, observe the participants’ overall experience and whether the non-tool-assisted used any tool while translating, and ask for their opinions on the challenges that they encounter while translating technical texts into Arabic and reading Arabic technical translations. The questionnaire also asked about the quality of Arabic technical translations and the areas that could be improved if such quality requires improvement. Here, the tool-assisted group’s questionnaire differs from the non-tool-assisted one: the first question in each questionnaire is different, but the remaining three questions are the same (see Appendix B and C). The first question for the tool-assisted dealt with the tool’s impact on their translations; on the other hand, the first question for the non-tool-assisted addressed whether the participants used any translation-assisted tool to translate the text. The reason why the second, third, and fourth questions were repeated in the two questionnaires is that knowing the challenges that these translators encounter when translating technical texts into Arabic and reading Arabic technical translations, in addition to their opinions on the quality of Arabic technical translations, is fundamental to understanding the terminology situation and what is needed to improve it.
Data Analysis

According to Creswell (2014), in qualitative research, “the intent is to make sense out of text and image data” (p. 245). Therefore, as the sources of data in this study consisted of 10 Arabic translations of an English technical text and 10 responses to an open-ended questionnaire, descriptive content analysis and thematic analysis were employed to analyze the obtained data. Descriptive content analysis, on the one hand, is “a systematic coding and categorizing approach used for exploring large amounts of textual information unobtrusively to determine trends and patterns of words used, their frequency, their relationships, and the structures and discourses of communication” (as cited in Vaismoradi et al., 2013, p. 400).

On the other hand, “thematic analyses move beyond counting explicit words or phrases and focus on identifying and describing both implicit and explicit ideas within the data, that is, themes” (Guest et al., 2012, p. 9). To illustrate, the following steps clarify how the two methods were used. For the analysis of translations, descriptive content analysis, whose purpose is to identify the characteristics of content (as cited in Vaismoradi et al., 2013), was used to 1. Identify the characteristics of the translations both delivered by the tool-assisted and non-tool-assisted groups and 2. Compare the translations by the two groups to answer the first research question: How does using the Memsource termbase system impact Saudi freelance technical translators’ terminological competence? Furthermore, the analysis of the responses to the open-ended questionnaire was as follows: 1. Four themes were identified in the participants’ responses, and 2. These themes were interpreted to answer the second research question: How does using the Memsource termbase system to develop terminological competence for Saudi freelance technical translators assessed?

Analyzing the Translations by the Tool-Assisted and Non-Tool-Assisted Participants
The translations produced by the tool-assisted group (the participants who translated with the assistance of the Memsource termbase system) and the non-tool-assisted group (those who translated without the terminology tool) were analyzed using descriptive content analysis. The analysis focused on identifying the characteristics of the translations and comparing the characteristics of the translations produced by the two groups, highlighting the impact of the terminology tool on the tool-assisted group’s translations and, particularly, terminological competence.

Observing the translations of the tool-assisted group, it seems that as Memsource allowed the participants to translate segment by segment (see Figure 1 and Figure 2, Figure 2 shows the source text, which is segmented into various sections, each aligned with its Arabic translation), less untranslated segments were noticed in the tool-assisted translations. That is, of the five translations delivered by the tool-assisted participants, only one translation contained an untranslated segment (the topic was not translated). In contrast, the non-tool-assisted participants provided three incomplete translations. Table 1 shows the three untranslated segments in the non-tool-assisted translations.

**Figure 2**

*The tool’s alignment feature*
Table 1

*Three untranslated segments were witnessed in the non-tool-assisted translations*

<table>
<thead>
<tr>
<th>Source text (ST):</th>
<th>Target text (TT):</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>underlined is</strong></td>
<td><strong>between</strong></td>
</tr>
<tr>
<td>not translated into target text</td>
<td>brackets are untranslated segments</td>
</tr>
</tbody>
</table>

| The invention relates to a system and **method** | تستند فكرة الاختراع على نظام متكامل (وطريقة لـ ..) |
| ...can track the position of the robotic arm and the imaging system in relation to the patient's body | يمكنه تحديد موقع وموضع الذراع الآلية (ومنظَم التصوير (داخل جسم المريض)) |
| ...as well as its various components, such as the robotic arm, the imaging system, and the navigation module. | بما في ذلك أجزاءيه العديدة (كالذراع الآلية) ومنظَم التصوير ووحدة التنقل |

Accuracy, which is another important characteristic, is concerned with transferring the ST elements into the TT with no distortion of meaning; it is to deliver the original message into the other language without altering the meaning of that message, including additions and/or omissions (Nababan et al., 2012, as cited in Irawati, 2019). Concerning the accuracy of both groups’ translations, it appeared that the translations delivered by the tool-assisted participants contained less inaccurately translated segments in comparison with the translations by the non-tool-assisted participants. To be specific, 11 inaccurate translations of different segments were found in the tool-assisted translations, whereas 12 inaccurate translations were noticed in the non-tool-assisted translations. It was also noted that some
words/phrases were similarly translated inaccurately by both groups. Table 2 illustrates the inaccurate translations by the two groups.

**Table 2**

*Inaccurate translations by the tool-assisted and non-tool-assisted groups*

<table>
<thead>
<tr>
<th>ST: underlined word/phrase is inaccurately translated</th>
<th>Inaccurately translated segments in TT (separated by the slash sign): between brackets is a more accurate translation</th>
<th>Occurrence of inaccurate translation in both groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>The system includes يتكون الاختراع/يحتمال الجهاز (النظام)</td>
<td>2 by non-tool-assisted</td>
<td></td>
</tr>
<tr>
<td>Procedure/s إجراء/إجراءات (عملية/عملية جراحية)</td>
<td>2 by non-tool-assisted &amp; 1 by tool-assisted</td>
<td></td>
</tr>
<tr>
<td>The patent claims استحق براءة الاختراع/طالب براءة الاختراع مطالبات (طالب براءة الاختراع) بتغطي براءة الاختراع النظام/حق براءة الاختراع</td>
<td>3 by both groups</td>
<td></td>
</tr>
<tr>
<td>Medical Device براءة اختراع الأجهزة الطبية (براءة اختراع جهاز طبي)</td>
<td>2 by non-tool-assisted &amp; 1 by tool-assisted</td>
<td></td>
</tr>
<tr>
<td>. . . track the position of the robotic arm and the فيما يتعلق/فيما يتصل بجسم المريض (داخل جسم المريض)</td>
<td>1 by non-tool-assisted &amp; 2 by tool-assisted</td>
<td></td>
</tr>
</tbody>
</table>
imaging system in relation to the patient's body

<table>
<thead>
<tr>
<th>An imaging system</th>
<th>أنظمة التصوير (نظام تصوير)</th>
<th>1 by non-tool-assisted</th>
</tr>
</thead>
<tbody>
<tr>
<td>System and method for performing. . .</td>
<td>أنظمة وطرق للفحص . . . (نظام وطريقة)</td>
<td>1 by tool-assisted</td>
</tr>
<tr>
<td>The system includes a robotic arm that is controlled by a computer system and is capable of moving in multiple directions</td>
<td>يحتوي النظام على ذراع آلية تتحكم فيها نظام كمبيوتر و قادر على التحرك في اتجاهات متعددة (وقادرة -الذراع الآلية - على . . .)</td>
<td>1 by tool-assisted</td>
</tr>
<tr>
<td>The system includes a robotic arm that is controlled by a computer system</td>
<td>يحتوي النظام على ذراع آلية تتحكم بنظام الحاسب الآلي (يتقدم -الذراع الآلية - من خلال نظام الحاسب الآلي/ ذراع آلية مرتبطة بنظام الحاسب الآلي)</td>
<td>1 by tool-assisted</td>
</tr>
<tr>
<td>. . . can track the position of the robotic arm</td>
<td>يمكنه تحديد موقع ووضع الهدف (يمكنه تحديد موقع/يمكنه تحديد وضع)</td>
<td>1 by non-tool-assisted</td>
</tr>
</tbody>
</table>

Furthermore, the consistency of the translations by the two groups was another significant characteristic. The notion of consistency here, especially regarding translating
terms into Arabic, refers to the consistent use of terms in which each term represents one concept in the target text (Darir et al., 2019). Looking into the translations provided by the two groups, it was apparent that both groups produced the same number of inconsistent translations: four inconsistently translated segments relating to translating the technical terms in the text were observed in the translations by the tool-assisted and non-tool-assisted groups. Table 3 highlights these inconsistent translations by both groups.

**Table 3**

*Inconsistent translations by the tool-assisted and non-tool-assisted groups*

<table>
<thead>
<tr>
<th>ST: underlined concept is translated inconsistently (the slashes indicate that the same concept is repeated in different parts of the text)</th>
<th>TT: different translations are used to render the same ST concept (indicated by the use of the plus sign)</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>. . . image-guided percutaneous procedures</strong></td>
<td>العمليات الجراحية الجلدية الموجهة بالصور + العمليات والإجراءات الجراحية الجلدية بطريقة التوجيه المصوّر</td>
<td>Non-tool-assisted</td>
</tr>
<tr>
<td><strong>The device. . . includes an imaging system/. . . the robotic arm and the imaging system/. . . the imaging system</strong></td>
<td>نظام التصوير + نظام تصوير وأشعة + نظام التصوير</td>
<td>Non-tool-assisted</td>
</tr>
<tr>
<td>. . . system and method for performing image-guided percutaneous procedures</td>
<td>آداء الإجراءات الجلدية الموجهة بالصور + تأثير الإجراءات الجلدية الموجهة بالصور</td>
<td>Non-tool-assisted</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>. . . robotic arm</td>
<td>الذراع الآلي + الذراع الروبوتية</td>
<td>Tool-assisted and non-tool-assisted</td>
</tr>
<tr>
<td>. . . image-guided percutaneous procedures/ . . . during the procedure</td>
<td>عملية جراحية/عمليات جراحية + جراحة</td>
<td>Tool-assisted</td>
</tr>
<tr>
<td>. . . during the procedure/ . . . allowing for precise targeting of the procedure</td>
<td>عملية + إجراء</td>
<td>Tool-assisted</td>
</tr>
<tr>
<td>System and method for performing image-guided percutaneous procedures/ . . . invention relates to a system and method for performing image-guided percutaneous procedures</td>
<td>الصور الموجهة للفحوصات التي يتم عن طريق الجلد + الفحص الذي يتم عن طريق الجلد</td>
<td>Tool-assisted</td>
</tr>
</tbody>
</table>
Regardless of whether the translation was delivered by a tool-assisted or non-tool-assisted group, it was witnessed that certain terms were translated differently by the participants in both groups, such as “navigation module”, which was translated into “وحدة مراقبة” نظم توجيه، “وحدة ملاحة” وحدة مراقبة تحليلات الخزعية، “biopsies” which was translated into “تحليلات الخزعية” الخزعات، “الخزعات” أخذ الخزعات، and “أخذ الخزعات”, emphasizing that standardizing Arabic specialized terminology is required to facilitate comprehension and communication.

The main characteristics of the translations by the tool-assisted and non-tool-assisted groups were discussed. As the technical text that the participants translated was short (142 words) and due to the small number of participants and short time assigned for this study, a significant impact of the tool’s use on the participants’ terminological competence was difficult to assess. However, it was possible to gain a few insights after examining the translations provided by both groups: first, the impact of the tool on the translations by the tool-assisted group was positive, namely concerning providing complete, more accurate translations (see Table 1 and Table 2. In Table 1, the non-tool-assisted participants provided three incomplete translations compared to one incomplete translation by a tool-assisted participant); second, since terminological competence stresses the importance of translating terms consistently, it appeared that the tool had no significant impact on assisting the tool-assisted participants in translating the text more consistently as there were four inconsistency issues in the tool-assisted translations (the same number of inconsistencies found in the translations by the non-tool-assisted).

Analyzing the Questionnaire Responses by the Tool-Assisted and Non-Tool-Assisted Participants

In addition to the translation task, the participants, both tool-assisted and non-tool-assisted, completed an open-ended questionnaire of four questions to answer the second
study’s question, which is concerned with assessing the use of the tool to develop the tool-assisted participants’ terminological competence. It is important here to highlight that the tool-assisted and non-tool-assisted questionnaires were dissimilar—the first question in each questionnaire was different, whereas the rest of the questions were the same. This is because the tool-assisted group was asked in the first question about the use of the terminology tool but the non-tool-assisted group was asked about whether they used any tool to translate the text. Here, the analysis of the questionnaire responses was accomplished employing thematic analysis: four themes were identified in the participants’ answers and then were interpreted. As “the impact of [thematic analysis] is to aggregate data into a small number of themes...” (Creswell, 2013, as cited in Creswell, 2014, p. 245), four themes were identified and presented in the following sub-sections.

**The Impact of Memsource Termbase System on the Translations by the Tool-Assisted**

Examining the responses of the tool-assisted participants on the impact of the tool on their translations, three out of the five participants considered the tool to have no apparent impact on their translations: “I think there is no apparent change in my translation with Memsource compared to the translation I produce without using it” and “I think that my translation didn’t change that much”. The remaining two participants, in contrast, stated that “the tool saved a lot of time and energy, and I was able to focus more on the context... rather than looking into dictionaries” and “after creating a termbase translating the document was easier... it was a faster process, and it saved my efforts and gave me time to think more about the structure”. It was evident from these two responses that the tool facilitated the translation process; the translators here focused on producing a translation that is structured properly and that the target reader can comprehend easily. Little attention was given to producing a translation with consistent, accurate use of terminology. Referring to the negative
responses above, as the text only contained 11 repeated terms (note that when the translator approaches a term previously translated and stored in the termbase, the termbase suggests the translation of the term so the translator does not have to type the translation and/or use a different translation), translating the terms in the text using the termbase did not prove to be significantly useful. Using the tool with longer texts, particularly with more repeated terms, could prove to be useful in delivering more consistent and accurate translations.

**The Use of Translation-Assisted Tools/Websites by the Non-Tool-Assisted**

The five non-tool-assisted participants were not assisted with the Memsource termbase system. Among these participants, only one participant used a translation-assisted tool, namely Google Translate, “but with heavy post-editing”, said the participant. This participant further explained that “using Google Translate with these types of texts saves time, especially regarding sentence structure”. In addition, two participants used online dictionaries, such as Alma’any and Reverso, for “searching specific meanings in both languages” and “to find the closest equivalents for terminology and words used”, whereas the last two participants mentioned that they did not utilize any tool/website during the translation process.

**The Different Challenges Encountered by Both Groups Regarding the Translation of Technical Texts into Arabic and the Reading of Arabic Technical Translations**

After the tool-assisted and non-tool-assisted groups completed the questions about the use of the tool and the use of translation assisting tools/websites while translating the text, they responded to two questions about challenges. First, both groups were asked about the challenges encountered when translating technical texts into Arabic and ways to overcome such challenges. The participants’ answers here vary, but the most common answer, which
was provided by four participants (two tool-assisted and two non-tool-assisted) was finding the right terms in Arabic and/or understanding technical terms to render them into Arabic: “finding the right and suitable term has been always the main challenge”, in which a different participant added “understanding and visualizing what the device [term] is to deliver that picture to the target reader”. The participants overcame such challenges by consulting different dictionaries, reading original Arabic technical texts, and creating a glossary to be used when translating technical terms. It was important as well to discuss the different responses of the rest of the participants. One non-tool-assisted participant discussed that “technical terms are challenging for their wide-spread synonyms and inaccurate translations in Arabic”, emphasizing the issue of unstandardized use of Arabic specialized terminology, but another non-tool-assisted participant seemed to encourage creating new translations for terms already translated, stating that “sometimes, the term has already existed but it does not sound accurate and it is not convincing”. In addition, two tool-assisted participants considered the structure and creating a termbase to be reused in translating different Arabic technical texts to be challenging. Here, the former participant explained that “creating a translation that is coherent and flow naturally is very difficult” and suggested that making different drafts of one’s translation can facilitate spotting wrong structures, while the latter emphasized the challenge of reusing a termbase with different technical texts, suggesting that the “potential different contexts” can impact translation quality. Second, both groups dealt with a question concerning the challenges of reading Arabic translations of technical texts. The answers here, both by tool-assisted and non-tool-assisted participants, can be categorized into three groups: group one, group two, and group three. For group one, which consisted of four participants (three tool-assisted and one non-tool-assisted), the challenges of unclear Arabic translations that are difficult to understand and that contain complex terms and structures were the most common. This is highlighted in the two quotes “Sometimes Arabic
translations of technical texts are unclear and cannot be understood” and “Not being able to understand the text due to the use of complex words and sentences”. Group two, on the contrary, believed that the word-for-word translation and/or literal translation found in Arabic translated technical texts were challenging and can be considered as a disadvantage, as emphasized in “literal translation is the most common disadvantage of texts translated into Arabic”. In group three, the two tool-assisted and non-tool-assisted participants viewed the concept of consistency of terminology and overall translation as a challenge in Arabic technical translations, stating that “most challenges refer to the consistency of the translation and the terminology”.

**The Quality of Arabic Technical Translations**

The challenges posed by translating technical texts into Arabic and, particularly, reading Arabic translations of technical texts indicated that the quality of Arabic technical translations requires improvement. Therefore, the fourth question presented in the questionnaire addressed the quality of Arabic translations of technical texts and whether such translations require improvement. Looking into the participants’ responses, it was interesting to see them all agreeing that Arabic technical translations require improvement in the following: first, the complex structure in the Arabic translated technical text should be replaced with an easy-to-understand-and-follow structure; second, standardized glossaries/termbases developed to be used when translating such texts can help in producing accurate and consistent translations; third, if the technical text is machine translated (MT), it must be post-edited by a human translator, and if the use of MT is to be relied on in translating such texts, there should be developed translation memories (TM: refers to a memory that stores previously translated texts) that can assist the machine in producing more accurate translations; fourth, foreign technical terms should be translated into Arabic but not transliterated (transliteration here refers to changing the term’s alphabet into that of the target
language); introducing foreign terms into Arabic without proper translation can affect the language negatively and can be misunderstood by the unspecialized people. It is significant to mention that the first point was discussed by two tool-assisted participants: “I think Arabic technical translations should be simple and smooth with less use of complex structure so the average reader can understand easily”. The second point was also emphasized by one tool-assisted participant and one non-tool-assisted participant: “We may develop an official approved glossary that relies on experts from both fields (translation & technology). That sort of collaboration will help us to come up with an accurate term”. The remaining points, however, were mentioned once by non-tool-assisted participants: “I see that most companies depend on machine translation for translating technical text. They should hire revisors and editors or depend on translation memory and CAT tools instead of depending on free machine translation” and “we see that new and huge number of technical terms are transferred into Arabic every day into its pronunciation... resulting in misunderstanding”.

The above four key themes examined in the participants’ responses to an open-ended questionnaire were analyzed using thematic analysis. These themes were further interpreted in the result section.
Results and Discussion

The current study aimed to assess the impact of using the Memsource termbase system on developing terminological competence for Saudi freelance technical translators registered in the Saudi freelance platform Bahr and the two social media websites Twitter and Telegram. The results were presented using the two research questions in the following subsections.

The Impact of Using Memsource Termbase System on the Tool-Assisted Participants’ Terminological Competence

To be terminologically competent, translators need to deal with terms effectively. In this regard, Toro and Fernández-Silva (2021) proposed a set of skills to develop to be terminologically competent. These skills consist of identifying terms in the text, looking for accurate equivalents in the TL, creating terminology resources (e.g., termbases or glossaries) to use during the translation process, managing terminology via terminology tools by creating terminology resources to be used, reused, and shared by translators. In addition, the concept of consistency with regard to translating Arabic specialized terms addressed in Darir et al. (2019) indicated that terminologically competent translators develop the skill of translating specialized terms consistently (one concept corresponds to one term), which was another skill considered when assessing the tool-assisted participants’ terminological competence.

The participants in this study were divided into two groups: one group was assisted with the Memsource termbase system and the other was not. Analyzing the translations produced by the tool-assisted group and comparing these translations to the non-tool-assisted ones aided in observing the impact of the tool on the tool-assisted participants’ terminological competence. The impact of the tool was particularly assessed according to the terminology proficiency skills proposed by Toro and Fernández-Silva (2021), in addition to the skill of
translating Arabic specialized terms consistently suggested in Darir et al. (2019). Table 4 shows the terminological skills along with their development in the tool-assisted group’s translation process and product.

**Table 4**

*Terminological skills and their development in the tool-assisted group’s translation process and product*

<table>
<thead>
<tr>
<th>Terminological skill</th>
<th>Development of skill in translation process and product</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identifying terms</td>
<td>All five tool-assisted participants identified the terms in the text as this step was needed to create the termbase. This was evident as the termbase they created included most of the technical/medical terms in the text</td>
</tr>
<tr>
<td>2. Accurate translation of terms/phrases</td>
<td>11 inaccurate translations were found in the tool-assisted translations compared to 12 inaccuracies in the non-tool-assisted translations (see Table 2)</td>
</tr>
<tr>
<td>3. Creating a terminology resource/termbase</td>
<td>All five tool-assisted participants created their own termbases before translating the text</td>
</tr>
<tr>
<td>4. Managing terms using the terminology management tool</td>
<td>All five tool-assisted participants were able to manage their terms as they created their termbases before translating</td>
</tr>
</tbody>
</table>
and used their termbases to translate the text; no problems were reported by these participants.

| 5. Consistent translation of terms | 4 inconsistent translations of terms were found in the tool-assisted translations; similarly, 4 inconsistencies were noticed in the non-tool-assisted translations (see Table 3) |

Table 4 illustrated the positive impact of using the Memsource termbase system on the tool-assisted participants’ terminological competence, especially concerning the first, third, and fourth skills. The second and fifth skills, nevertheless, suggested that the tool had no apparent impact on producing more accurate and consistent translations.

**Assessing the Use of Memsource Termbase System to Develop Terminological Competence for Saudi Freelance Technical Translators**

Examining the responses of the tool-assisted participants to the first question in the open-ended questionnaire—the question asked about whether the termbase that they created had an impact on their translation—two out of the five participants gave an affirmative answer, whereas the remaining three explained that the tool had no significant impact on their translations. Table 5 shows the participants’ responses regarding the tool’s impact on their translations.

**Table 5**

*The tool-assisted participants’ responses to the question about the impact of the tool on their translations*
Regarding the two positive answers, the participants related the impact of the tool to assisting in selecting better equivalents where the context is taken into consideration (as they created their termbases before translating the text), facilitating the translation process, and producing a more accurate and/or “natural translation”, as the participant highlighted. It is important as well to discuss that the answers of the third and fifth participants suggested that...
the tool had a minimal impact on their translations. This could be because the text that the participants translated was short and, as a result, they were not able to witness the impact of the tool on translating the text as a whole and, particularly, translating its terms.

The results were further interpreted and compared with the most relevant study to the current study, namely Toro and Fernández-Silva (2021).

In their study, Toro and Fernández-Silva (2021) aimed to 1. Define the concept of terminological competence in relation to specialized translation, 2. Situate terminological competence, which is one of the competencies developed by the specialized translator, within the translation competence model proposed by the PACTE group (2003) [Figure 3 shows the position of terminological competence within the PACTE (2003) model], and 3. Propose two instruments—a translation task (a scientific English text to be translated into Spanish) and a semi-structured interview—to assess the terminological competence of five advanced English-Spanish translation students at the Pontifical Catholic University of Valparaíso, Chile. As the researchers proposed a set of six skills to empirically measure the translation students’ terminological competence, Toro and Fernández-Silva found that 1. all five students identified the terminological units in the scientific text, 2. two out of the five students carried out thematic and contextual documentation tasks (hence looking up the topic of the text to be translated to understand it and learn about it), 3. all five students carried out terminology documentation tasks (they, for instance, consulted different sources to find equivalents for the terms in the text), 4. all five students created a terminology resource (in this process, some of the students created their resources using Memsource while the others used Excel), 5. none of the students managed their terminology via computer tools (despite creating their terminology resources to translate the text, none of the students managed their terminology. The students instead translated the text traditionally, including those who created their resources using Memsource), and 6. all five students solved the terminological issues
encountered (when translating certain terms in the text, for instance, the students were able to use different translation techniques to translate the terms).

**Figure 3**

*PACTE (2003) translation competence model adapted by Toro and Fernández-Silva (2021)*

*where terminological competence is situated in-between extralinguistic, strategic, and instrumental sub-competencies*

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As the previous study aimed to measure terminological competence for five advanced English-Spanish translation students based on six predetermined terminology proficiency skills, the current study aimed to assess the impact of using the Memsource termbase system on developing terminological competence for Saudi freelance technical translators. Through using a translation task, which consisted of translating an English technical text into Arabic,
and an open-ended questionnaire, it was evident that the five freelance translators who were assisted with the Memsource termbase system demonstrated a range of terminological skills (see Table 4). Relating these results to the results found in Toro and Fernández-Silva (2021), it is important to mention that three of the proposed six terminology proficiency skills in Toro and Fernández-Silva (2021) were taken to assess the impact of the Memsource termbase system on the tool-assisted translators’ terminological competence (see Table 4). As Toro and Fernández-Silva (2021) found that terminology management tools were not used by the students in their study, the tool-assisted participants in the current study used the Memsource terminology management tool while translating the technical text; however, the non-tool-assisted participants did not use any terminology management tool as they did not employ any translation-assisted tool (except for a non-tool-assisted participant who used Google Translate). Furthermore, the tool-assisted participants created their own termbases prior to translating the technical text. Similarly, the students in Toro and Fernández-Silva (2021) created their terminology resources to translate the text. Nevertheless, the non-tool-assisted participants in this study translated the text without creating a termbase/terminology resource. In this regard, the non-tool-assisted participants reported in the open-ended questionnaire that they encountered various challenges when translating the technical text at hand and/or technical texts generally, in which all the challenges reported were related to translating technical terms into Arabic. Table 6 highlights the challenges that the non-tool-assisted participants face when translating technical texts into Arabic.

Table 6

*The challenges reported in the open-ended questionnaire relating to translating technical texts into Arabic by the non-tool-assisted participants*
These challenges demonstrated that translating technical terms into Arabic is not an easy task. Another important result presented in the current study and indicated in Toro and Fernández-Silva (2021) is related to the quality of translation. As the researchers in Toro and Fernández-Silva (2021) studied terminological competence in specialized translation to ensure specialized translated texts that are concise and precise, the current study aimed to develop freelance translators’ terminological competence because developing this competence can assist in producing consistent and accurate Arabic technical translations and solving Arabic terminological anarchy. The quality of translation was, thus, one of the topics
that the participants in this study were asked about, namely in the open-ended questionnaire. Both tool-assisted and non-tool-assisted participants were asked about the quality of Arabic technical translations and whether such quality requires improvement. Reflecting on their answers, all 10 participants think that the quality of Arabic translations of technical texts needs to be improved regarding different aspects, in which the two most common aspects, which were repeated twice each, were related to improving the structure of Arabic technical translations and developing a term database to be used in the translation of (English) technical texts into Arabic. Table 7 mentions the participants’ answers in relation to the aspects of Arabic technical translations that need improvement.

### Table 7

*The participants’ responses to the question about the quality of Arabic technical translations and whether this quality requires improvement*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Opinions about the quality of Arabic technical translations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Structure needs improvement: “Arabic technical translations should be simple and smooth with less use of complex structure”</td>
</tr>
<tr>
<td>2</td>
<td>Structure needs improvement: “The most fundamental thing to work on is producing a structure that is clear and smooth”</td>
</tr>
<tr>
<td>3</td>
<td>Unspecified: “نعم” (yes, the quality of Arabic technical translations needs to be improved)</td>
</tr>
<tr>
<td>4</td>
<td>A term database can improve quality: “Arabic translation of technical texts could be improved if there is a database of various terms”</td>
</tr>
<tr>
<td></td>
<td>Arabic technical concepts need improvement: “Arabic language still has to be more improved relating to technical concepts.”</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>6</td>
<td>Overuse of machine translation: “Most companies depend on machine translation for translating technical text. They should hire revisors and editors”</td>
</tr>
<tr>
<td>7</td>
<td>Knowledge of Arabic as a language translated into should be developed: “The translator should take care of developing his mother tongue”</td>
</tr>
<tr>
<td>8</td>
<td>Terms should be translated properly into Arabic: “New and huge number of technical terms are transferred into Arabic every day. . . resulting in misunderstanding”</td>
</tr>
<tr>
<td>9</td>
<td>A term database can improve quality: “We may develop an official approved glossary that relies on experts from both fields (translation &amp; technology)”</td>
</tr>
<tr>
<td>10</td>
<td>Avoiding the use of different terms to describe one concept can improve quality: “This [the use of different terms to describe one concept] will make the translator confused and she/he must be aware of every term they use”</td>
</tr>
</tbody>
</table>
Conclusion

The present study concluded that the Memsource termbase system had a positive impact on the tool-assisted freelance translators’ overall translations (see Table 1: the tool-assisted participants provided more complete translations compared with the non-tool-assisted) and terminological competence (see Table 4 and Table 5. In Table 4, the tool-assisted participants showed three terminological competencies: the participants identified the terms in the text, extracted these terms and created a termbase, and managed their terms before and during the translation process. In Table 5, two of the five tool-assisted participants considered the tool to be impactful on their translation, namely assisting in selecting the correct translation of terms and producing well-structured Arabic translations. Among the remaining three tool-assisted participants, two considered the impact of the tool to be minimal on their translations). As the study included a small sample of 10 Saudi freelance technical translators selected from three online platforms, a significant impact of the terminology tool on the participants’ developed terminological competence was difficult to assess. Studying a larger sample, instead, who provide their translation services online at different platforms and/or in-house translators could present more conclusive results. In addition, the English technical text that the participants translated was short (142 words). A longer text with more terms or a selection of texts could provide more significant results in relation to the impact of the terminology tool on terminological competence.

As a few studies were concerned with terminological competence in relation to specialized translation, including Toro and Fernández-Silva (2021), Chatrat (2019), Liu (2019), Fernández-Silva and Cañete (2020), this study incorporated a terminology tool into the translation process to assess its impact on developing the selected freelance translators’ terminological competence. Also, it is worth noting here that there seem to be no previous studies that investigated the role of terminology tools in developing terminological
competence for Saudi freelance translators or proposed developing Arab translators’ terminological competence as a solution for the Arabic terminology standardization issue, which indicates that such a topic, in addition to other translation sub-competencies, should be studied in relation to Arab translators.
References


Fernández-Silva, S., & Cañete, B. (2020). The development of specialized documentation competence in translation students across their training. Sendebar, 31(0). https://doi.org/10.30827/sendebar.v31i0.11788


https://doi.org/10.17533/udea.mut.v14n2a07

Appendix A

The English Technical Text

Medical Device Patent

US Patent No. 8,902,931, titled "System and method for performing image-guided percutaneous procedures."

The invention relates to a system and method for performing image-guided percutaneous procedures, such as biopsies and ablation of tumors. The system includes a robotic arm that is controlled by a computer system and is capable of moving in multiple directions. The device also includes an imaging system, such as an ultrasound or CT scanner, that provides real-time images of the patient's body during the procedure. The system also includes a navigation module that can track the position of the robotic arm and the imaging system in relation to the patient's body, allowing for precise targeting of the procedure. The patent claims cover the system as a whole, as well as its various components, such as the robotic arm, the imaging system, and the navigation module.
Appendix B

The Tool-Assisted Group’s Questionnaire

Please answer the following questions:

1. After you used the tool (the termbase that you created) to translate the English technical text into Arabic, do you think your translation has changed compared to the translations you produced without the tool? In what way?

2. When translating a technical text into Arabic, what are the challenges that you usually face (e.g., finding the right terms, translating consistently, creating a termbase to be reused in future translations)? How do you overcome them?

3. What are the challenges you face during reading most Arabic translations of technical texts?

4. Do you think that the quality of Arabic technical translations needs to be improved (e.g., the use of different Arabic terms to refer to one concept)? In what way?
Appendix C

The Non-Tool-Assisted Group’s Questionnaire

Please answer the following questions:

1. Did you use any translation-assisted tool (and/or machine translation) when you translated the English technical text into Arabic? What is the tool and why did you use it?

2. When translating a technical text into Arabic, what are the challenges that you usually face (e.g., finding the right terms, translating consistently, creating a termbase to be reused in future translations)? How do you overcome them?

3. What are the challenges you face during reading most Arabic translations of technical texts?

4. Do you think that the quality of Arabic technical translations needs to be improved (e.g., the use of different Arabic terms to refer to one concept)? In what way?