Effect of using mobile translation applications for translating collocations

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Abstract

Purpose – This study aims to examine the effects of using mobile translation applications for translating collocations.

Design/methodology/approach – The study followed an experimental design where 47 students of English as foreign language in a Saudi university were randomly categorized into two groups. Both the groups were given a translation task consisting of 30 sentences with fixed, medium-strength and weak collocations. The participants in the experimental group (*n* 23) were asked to use a mobile App (Reverso) to translate the sentences, while the control group (*n* 24) was allowed to use only paper-based dictionaries. The translations were scored and analyzed to measure if there was any significant difference between the two groups.

Findings – The results indicated that the mobile translation application was more effective in translating fixed and medium-strength collocations than weak collocations, and in translating collocations in both translation directions (i.e. from Arabic into English or vice-versa).

Originality/value – The findings suggest that integrating translation technologies in general and mobile translation applications in particular in translation can enhance the translation process. Students can utilize mobile translation applications to enhance their translation skills, especially for translating collocations.

Keywords Translation, Mobile-assisted translation, Collocations, Mobile translation applications, Translators' training, Translation pedagogy

Paper type Research paper

1. Introduction

Translation plays a fundamental role in enhancing communication among people from different nations. Recently, translation has assumed a new dimension in the wake of technological revolution. Translation technologies have changed the translation profession into a highly automated area where translators need to equip themselves with the required skills in order to cope with the competitive job market (Kenny, 2011; Sazdovska-Pigulovska, 2018). Laviosa and Falco (2021, p. 7) discuss the five complementary areas of competence based on the European Master's in Translation Competence Framework (2017) (Toudic and Krause, 2017). The competence required by professional translators covers the following areas: language and culture, translation, technology, personal and interpersonal and service provision.

Technology competence includes the knowledge and skills used to implement present and future translation technologies within the translation process. There are two main approaches to using technology in translation. The first is machine translation (MT),

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defined as a sub-field of computational linguistics or natural language processing that involves the use of software to translate texts or speech from one natural language to another (Quin and Xiaojun, 2015). The second approach is computer-assisted translation (CAT) which denotes any type of computerized tool that translators use as part of their jobs (Bowker, 2002). These technologies include translation memory systems, terminology management systems, corpora and corpus analysis tools and electronic multilingual dictionaries and glossaries.

In the wake of advances in mobile technologies, several mobile-based translation applications were introduced over the past decade, aiming to enable multilingual communication and reducing language barriers. Crespo (2016, p. 83) noted that such applications offer flexible, dynamic and quick translations with acceptable degrees of quality by utilizing the affordability and ubiquity of mobile devices. Therefore, mobile translation applications are now gaining popularity among travelers (Wang and Xiang, 2012), translators (Nitzke *et al.*, 2019), medical workers (Panayiotou *et al.*, 2019, 2020), social care workers (Bock *et al.*, 2020; Liebling *et al.*, 2020; Wilson *et al.*, 2020) and language instructors and students (Ducar and Schocket, 2018; Senior, 2019; Tsai, 2019).

These applications also gained popularity among translators and translation trainees. Busuu, iTranslate, Google Translate, Duolingo and Reverso are some examples of frequently used translation applications, according to application stores. Compared to traditional paper-based dictionaries and glossaries, mobile translation applications usually include more advanced functions such as quick, free access to content; contextualized translations; speech-to-text options, multidirectional access and camera-based translation. However, the impact of these applications on translation students is nevertheless limited, especially while translating certain language constructs such as collocations. This research aims to examine the effects of mobile translation applications on translating collocations. The study findings are expected to contribute to bridging the gap in the literature on the impact of this recent technology on translation quality and promoting translator training by highlighting whether such tools should be integrated into translation training classrooms and how they can help enhance students' translation skills.

2. Review of literature

2.1 Translation and collocations

The term collocation has been defined by various scholars. Robins (2014, p. 64) describes it as "the habitual association of a word in a language with other particular words in sentences." Furthermore, Lewis (1997, p. 8) defined collocation as "the readily observable phenomenon whereby certain words co-occur in natural text with greater than random frequency." Examples of common English collocations are *fast food*, *do a favor* and *do homework*. A collocation can also be seen as a multi-word expression that acts in the text as a unit or as a sequence of words that, as a group, carry a meaning that is different from its individual words. However, the process of translating the meaning of collocation is not easy. It requires the translator to have a good command of both languages. Besides, collocations can include many cultural aspects such as religious beliefs, specific cultural items, and different ideologies of people from diverse societies and nations. Translating collocations from the source language (SL) into the target language (TL) is an essential task that aims to understand the mutual association among cultures, religions and languages.

Collocations have been classified with different taxonomies. O'Dell and McCarthy (2017) classified them based on grammar into six categories, including nouns and adjectives and nouns and verbs. Hill (2000) classified them lexically into fixed, strong and weak, pointing out that some collocations are fixed and highly predictable from one of the component words. In contrast, some collocations are considered so weak that their occurrences often go unnoticed or seem too general as the two-component words are inclined to occur freely.

According to O'Dell and McCarthy (2017), fixed collocations are so strong that they cannot be changed in any way. For example, you can say *I was walking to and fro* (meaning I was walking in one direction and then in the opposite direction, repeatedly). No other words can replace *to* or *fro* or *and* in this collocation. The meaning of certain fixed collocations cannot be estimated from individual words. These collocations are called idioms. The collocation *cold blood* as in the sentence, "He murdered this boy in cold blood," can be translated into Arabic as "بدم بارد". The second type is called a strong collocation, which means that the words are very closely associated with each other. For example, the adjective *mitigating* almost always collocates with *circumstances* or *factors*; it rarely collocates with any other word. Another example is inclement weather as in the sentence, "The flight had been delayed due to inclement weather." In this example, *inclement weather* can be translated into Arabic as "سوء الأحوال الجوية." The third type is weak collocations, which are made up of words that collocate with a wide range of other words. For example, you can say you are in broad agreement with someone. However, *broad* can also be used with several other words such as *a broad avenue, a broad smile, broad shoulders, a broad accent* and so on. These are weak collocations, in the sense that *broad* collocates with a wide range of different nouns. In Arabic, the collocation "broad agreement" can be translated as ".اتفاق واسع النطاق".

Many researchers argue that translating collocations can be challenging since various languages can have different collocations (Chukwu, 1997; Shraideh and Mahadin, 2015; Habtoor and Al-Swaidan, 2019). Many scholars argue that using wrong collocations may seriously affect the validity of translation (Jabbari and Kavoosi, 2017; Obeidat and Sepora, 2019; Trang *et al.*, 2021). The degree of challenge seems to be higher when translating from English to Arabic and vice versa. Rabeh (2009) highlighted certain challenges, one of which is the generalization difficulty, as several English words collocate with the same words, but the Arabic equivalent of these words does not necessarily collocate with the same words in Arabic. Another challenge is the collocations' variability meaning that different collocations can denote the same meaning in English, but only a single collocation is used to convey the same meaning in Arabic and vice versa.

A study conducted by Shraideh and Mahadin (2015) highlighted the most common difficulties graduate and postgraduate students face when translating collocations in political texts into Arabic The results revealed that many participants used synonymy and literal translation as primary strategies to render collocations followed by paraphrasing and transposition, respectively. Approximation, elaboration and explication, and omission occupied the lowest rank in terms of frequency of use. In addition, Obeidat and Sepora (2019) conducted a study to analyze collocation translation errors when translating from Arabic into English. The analysis focused on translation errors found in the Arabic novel "Awlad Haratina" by Naguib Mahfouz. The study adopts Baker's (1992) model in identifying collocational errors which indicate that translators commit errors in translating collocations due to five main reasons: (1) the engrossing effect of the source text patterning, (2) misinterpreting the meaning of a source-language collocation, (3) the tension between accuracy and naturalness, (4) cultural specific collocation and (5) marked collocation in the source text. Overall, 71 errors were identified and linked to accuracy and naturalness, cultural specific collocation. The researchers recommended that translators should focus on the notion of collocation before the process of translation.

Collocational errors in literary texts were the focus of a study conducted by Bartan (2019). The researcher looked into Turkish college students' errors when translating verb + noun collocations in terms of restriction and collocability. The findings showed that more restrictions of collocations produce poorer collocation. The results also showed that translators spend a lot of time and energy translating restricted collocations due to the lack of collocational competency of the target language. The findings of these studies suggest focusing on the challenges students face when translating collocations and explore the

various strategies to help them overcome these challenges. One of these strategies can be integrating translation technologies, e.g. mobile translation applications.

2.2 Mobile translation applications

The advent of technology, especially the Internet, has created several opportunities for enhancing translation, with translators increasingly using the Internet in their careers. According to Garcia (2015, p. 68), "WBT as well as mobile phone applications are created with the specific purpose of facilitating the speed and consistency of human translators, thus reducing the overall costs of translation projects while maintaining the earnings of the contracted translators and an acceptable level of quality." Mobile translation applications can be defined as "translation, human or machine, that is performed through the use of mobile devices or realized through apps operated on mobile systems" (Liu and Watts, 2019, p. 47). A quick look at the application stores today shows a large number of translation applications supporting a wide range of languages. The affordability and features offered by these applications such as speech-to-text options and camera-based translation allowed them to gain immense popularity among users, especially translators. The recent versions of these applications incorporate new advanced technologies, e.g. augmented reality (Ouertani and Tatwany, 2019; Pu *et al.*, 2017; Saudagar and Mohammad, 2018; Wolk, 2020), artificial intelligence and machine learning (Tomasello, 2019; van der Meer, 2020), to enhance their accuracy and functionality. Despite their popularity, mobile translation applications have been criticized for their limited capabilities and security concerns (Schwartz, 2013). Other researchers believe that such applications can only assist in short, transactional communication and not long forms of conversation (Liebling *et al.*, 2020).

Evaluating the output of mobile translation applications was the focus of several recent studies. Liebling *et al.* (2020), for example, looked at the use of these applications in three different contexts: United States-based travelers, migrant workers in India, and immigrant populations in the United States. The study compared the perceptions and needs of frequent travelers to those of the two migrant communities and demonstrated that the mobile translation apps used did not fulfill users' needs and therefore, they proposed design implications to enhance the functionality of these apps, such as providing context-sensitive translations, dialect and accent support and adapting to users' literacy levels.

Even with these concerns, mobile translation applications are being widely used by students for various tasks. In the translation training context, Yanti and Meka (2019) looked at students' attitudes toward using Google Translate during a translation class. The data were collected using a questionnaire, a translation task, and interviews with 64 students. The results showed that 96% of the students used Google Translate frequently as a dictionary to quickly translate sentences and enrich their vocabulary. Furthermore, the results showed that students' performance in the translation task using Google Translate was moderate.

Javadi and Khezrab (2020) conducted a study on the impact of these applications on legal translation training. The researchers recommended using these tools to assist legal translation instruction highlighting, their various useful features such as voice commands, recording capability and handwriting recognition which can accelerate the translation process, however, no results on translation quality was reported. Within the same context of our current study, Bin Dahmash (2020), looked at the affordances of Google translate applications as perceived by students in Saudi Arabia. The researcher conducted focus group interviews and individual interviews to gather the data over six weeks. Results showed that students used the applications to assist their writing in English offering options to use the application in-class and in everyday life and serving as a language learning resource. She recommended promoting the use of such applications as a mini-dictionary, and encourages learners to use them as a resource to ensure accurate spelling and pronunciation.

A recent study by Wei (2021) examined students' perceptions regarding the use of Google Translate. The results showed that the students were generally positive toward the use of Google Translate, yet were aware of its limited capabilities, especially in translating longer sentences, paragraphs and texts. The researcher suggested that such applications should be integrated as one of the pedagogical tools and students should be guided on how to utilize such tools to enhance their learning process both within and outside the classroom. These recommendations were echoed in the study by Chung and Ahn (2021), which examined how learners' use of Google Translate affects syntactic complexity, accuracy, lexical complexity and fluency in L2 writing among 91 Korean learners of English. Text analysis of students' writing revealed major improvements in accuracy but unclear benefits in syntactic and lexical complexity. It was also found that Google Translate had advantages and disadvantages depending on the proficiency level (high vs. low) and text genre (narrative vs. argumentative). The study concluded that although Google Translate can be useful for improving accuracy, it must be used with discretion for it to benefit other aspects of L2 writing. Some studies were conducted to explore the extent to which the Internet influences the process of translation. For example, Mahdi (2022) examined the incorporation of web-based translation (WBT) on translating religious texts. The results indicated that WBT was more beneficial in translating words than translating sentences or passages. Additionally, WBT is useful in both directions: from English into Arabic as well as from Arabic into English.

The abovementioned studies revealed that translation websites and applications can be valuable tools to assist learners. However, further studies are needed to investigate the impact of these tools on translation challenges such as translation of collocation and how these tools affect translation quality. Therefore, the current study attempts to answer the following question:

RQ1. What is the impact of using mobile translation applications on the translation of collocations?

RQ2. Which type of collocation (fixed, medium-strength and weak) can best benefit from using mobile translation applications?

RQ3. Which translation direction can be enhanced by mobile translation applications (i.e. from Arabic into English or from English into Arabic)?

3. Methodology

3.1 Study design

An experimental research design with pre-test and post-test was used in this study. The participants were randomly assigned to two groups: experimental and control. The experimental group used Reverso for their translation, while the control group translated the sentences using hard copy dictionaries.

3.2 Participants

The study included 47 Saudi EFL students from the Department of English, University of Bisha, Saudi Arabia. They were enrolled in level seven (3rd year) at the English Department. They were enrolled in a Translation 2 course, which covers the lexical problems of Arabic<> English translation. All the students were native Arabic speakers aged between 19 and 24. The participants were divided into two groups randomly. The experimental group consisted of 23 students, while the control group had 24 students. Participants in both groups have been educated under the same government educational system (i.e. 12 years in public school)

where they were taught English as a foreign language for at least six years. The experiment was conducted in their regular classes and the tasks were used as part of class activities.

3.2.1 Translation test. The instrument used to collect the data were a translation test (See Appendix) created by the author based on Ghazalah (2011) to examine how participants used mobile translation applications to translate collocations. Two experts in translation validated the test, all ambiguous items were modified and some examples were rewritten correctly. The test comprised 30 sentences; each one included only one collocation. The pre-test consisted of the same collocations that were used in the post-test but in different sentences. The collocations varied from fixed, medium-strength, and weak. It included 10 sentences (five sentences each to translate from English into Arabic and from Arabic into English) for fixed collocations; 10 sentences (five sentences each to translate from English into Arabic and from Arabic into English) for medium-strength collocations; and 10 sentences (five sentences each to translate from English into Arabic and from Arabic into English) for weak collocations. Overall, the participants were asked to translate 15 sentences from English into Arabic and 15 sentences from Arabic into English. Each sentence with the correct translation of collocation was given one point. Therefore, the total points for the test were 30.

3.3 Mobile translation application

The mobile translation application used in the study was *Reverso* [1] (see Figure 1). It is a multi-platform mobile application developed for translation and language learning. It was founded in France by Theo Hoffenberg from Reverso Technologies Inc. The application supports more than 15 languages, including English, Arabic, Dutch, French, German, Hebrew, Italian, Japanese and Polish. Reverso is based on corpus data gathered from millions of authentic texts, including official documents, movie subtitles, product descriptions, etc. in multiple languages. Big data algorithms and machine learning approaches are used to process these texts to provide the user with accurate translation. The application includes several features such as online dictionaries in different fields, contextual translation, spell checkers and conjugation tools. The app received 4.6 out of 5 and was ranked #14 in the reference category in the App Store in Saudi Arabia with more than 10 million downloads [2].

Figure 1.
The interface of Reverso App

3.4 Procedures

The participants included 47 EFL students enrolled in the English Department at the University of Bisha, Saudi Arabia, in the first semester of the academic year 2019–2020. They chose to participate in the study voluntarily. Before the commencement of the treatment, all the participants were asked to translate 30 sentences. They were asked to write their answers on a sheet of paper, and were not allowed to use any kind of dictionaries (i.e. printed or electronic). The goal of the pre-test was to check their prior knowledge of the target collocations. In the second session, the participants were divided into two groups: experimental and control. The experimental group included 23 participants, and they were asked to use *Reverso* App to translate the sentences. They were told to translate the target sentences and they might edit the output proposed by the *Reverso* App. The control group comprised 24 participants. They were allowed to use paper-based dictionaries. The participants in the two groups were asked to write their answers on a sheet of paper and the 2-h session was conducted in a traditional classroom. Participants' answers were scored and analyzed to measure if there was any significant difference between the two groups. The rubric for evaluating the answers was developed by the author. The rubric stated that if the collocation was translated exactly as it was written in the answer key, it would be given one point; else zero. The focus was on the collocation only, meaning if the whole sentence was translated correctly but collocation was wrongly translated, then the score would be zero. The following section describes the analysis procedures comprehensively.

3.5 Data analysis

A *t*-test analysis was conducted on students' scores to determine the difference between the mean scores of the two groups in the pre-test and post-test. An ANOVA test was conducted to determine the impact of mobile translation applications on the translation of different types of collocations. Moreover, a *t*-test was carried out to measure the difference between the translation of collocations using mobile translation applications for both languages (i.e. English and Arabic). The analyses were performed using SPSS 22.0. Additionally, an eta-squared test was used to explore the effect size of using mobile translation applications on translation collocations. Data analysis results are shown next.

4. Results

To answer the research questions, students' scores of the translation pre- and post-tests were analyzed statistically. Since the sample size is relatively small, it is suggested to check whether the data are normally distributed. The normality distribution was tested using Shapiro–Wilk tests. The normality distribution is shown in Table 1.

As shown in Table 1, the distribution is normal in the pre-test and post-test ($p > 0.05$). To determine the effectiveness of using mobile translation applications on collocation translation, a *t*-test analysis was computed to compare the mean scores of the two groups. First, a *t*-test analysis was conducted for the pre-test scores of the participants in the two

		Kolmogorov-smirnov[a]			Shapiro–wilk		
	Group	Statistic	df	Sig	Statistic	df	Sig
Scores	CAT	0.159	23	0.135	0.967	23	0.618
	MT	0.167	23	0.094	0.936	23	0.146
	Control	0.166	24	0.088	0.917	24	0.051

Note(s): a. Lilliefors significance correction

Table 1.
Tests of normality

groups to examine students' homogeneity before conducting the experiment. Table 2 shows the mean and standard deviations of students' scores on the pre-test.

The pre-test scores of the control group and the experimental group were compared to see if they were similar or different before the experiment started. The results indicated that there was no significant difference (the p-value is 0.116), showing that the level of the two groups was homogeneous at the outset of the study.

To further examine the differences between the two groups and how the mobile translation application affected participants' achievement in translation, an analysis was conducted for the post-test. The post-test mean scores of the control and experimental groups were compared to see if there was any impact of mobile translation applications on translating collocations, as shown in Table 3 and Figure 2.

The results in Table 3 showed that the experimental group outscored the control group. The mean was 24.43 in the experimental group and 17.87 in the control group. The p-value was 0.033, which indicated that there was a significant difference between the two groups. The effect size (η^2) was 0.92, which indicated that the effect was large in favor of the experimental group. According to Cohen (1988), effect sizes are small ($\eta^2 = 0.01$), medium ($\eta^2 = 0.06$) and large ($\eta^2 = 0.14$). Therefore, the effect size in this study is large. Overall, the results indicated that using mobile phone applications for translating collocations was more effective than translating using paper-based dictionaries. To examine the impact of mobile translation applications on the translation of different types of collocations (i.e. fixed, medium-strength and weak collocations), an ANOVA analysis was conducted.

Table 2.
Comparison of pre-test scores between the two groups

	N	Mean	SD	Std. Error mean	F	Sig
Experimental group	23	9.7826	1.97614	0.41205	2.563	0.116
Control group	24	9.6250	1.49819	0.30582		

Table 3.
Comparison of post-test scores between the two groups

	N	Mean	Std. Deviation	Std. Error	F	Sig	η^2
Experimental group	23	24.4348	2.62551	0.54746	4.858	0.033	0.926
Control group	24	17.8750	1.67624	0.34216			

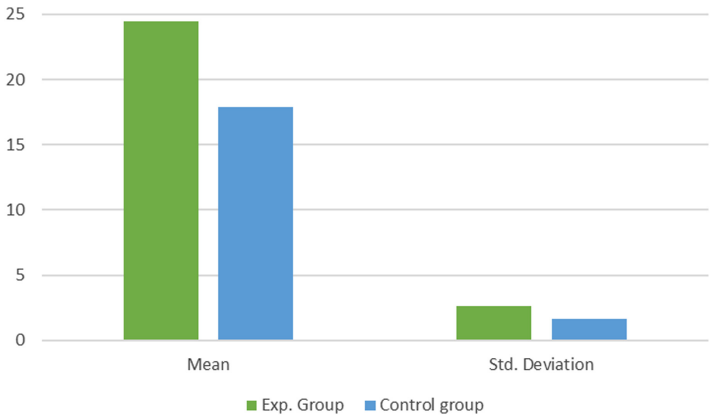

Figure 2.
Comparison of mean and SD between the two groups

As shown in Table 4, there was a significant difference (p-value is 0.003) between the scores of the participants who used the mobile translation application to translate fixed, medium-strength and weak collocations.

To determine the differences between the scores that the students got in the post-test based on the three types of collocations, a Scheffe's test was performed. The results are shown in Table 5.

As shown in Table 5, the mean difference between fixed and medium-strength collocations was not significant ($MD = 0.521$, $Sig = 0.360$), which indicated that using mobile translation applications was effective in the translation of fixed and medium collocations. In addition, the mean difference between fixed and weak collocations was significant ($MD = 1.30$, $Sig = 0.003$), indicating that using mobile translation applications was more effective in translating fixed compared to weak collocations. However, the mean difference between medium and weak collocations was not significant ($MD = 782$, $Sig = 0.105$).

Data analysis also explored the impact that mobile translation applications have on translating collocations in different language directions. In this regard, the participants were asked to translate 15 sentences from English into Arabic and 15 sentences from Arabic into English. Their scores were compared using t-test analysis.

The results shown in Table 6 indicated that there was no significant difference (p-value is 0.789) between the scores of participants who used mobile translation applications for translating sentences from English into Arabic or vice versa. This indicated that mobile translation applications can be effective either for translation from TL or SL.

5. Discussion

This study aimed to examine the effects of mobile translation applications on translating collocations. The first research question focused on the impact of using mobile translation

	N	Mean	SD	F	Sig
Fixed collocations	23	7.5217	1.34400	6.565	0.003
Medium strength	23	7.0000	1.12815		
Weak collocations	23	6.2174	1.20441		

Note(s): *The total score for each type is 10

Table 4. Comparison of post-test scores between the three types of collocations

		Mean differences	Sig
Fixed	Medium	0.52174	0.360
	Weak	1.30435*	0.003
Medium-strength	Fixed	−0.52174	0.360
	Weak	0.78261	0.105
Weak	Fixed	−1.30435*	0.003
	Medium	−0.78261	0.105

Table 5. Mean differences of post-test scores between the three types of collocations

	N	Mean	SD	t	Sig
English (TL)	23	11.43	1.50	0.259	0.789
Arabic (TL)	23	11.30	1.46		

Table 6. Comparison of post-test scores between the target languages

applications for translating collocations. The results of this study indicated that the mobile translation application was useful in translating collocations. The results showed that participants who used Reverso in translating collocations benefited the most, scoring higher than those who used traditional dictionaries. These findings are in line with results observed in previous studies such as Bin Dahmash (2020), Javadi and Khezrab (2020) and Chung and Ahn (2021), who found that students can use such applications to enhance their performance. Although Yanti and Meka (2019) found that students' performance in the translation task using Google Translate was moderate, it is worthwhile to mention that, unlike Google Translate, Reverso has the ability to show the translation within a context since it is based on multilingual corpora. Providing students with samples of translated segments to show how the words or expressions are used in their respective source and target text contexts can positively affect their translation of collocations. Many researchers support the integration of corpora in translator training (e.g. Alotaibi, 2017; Bowker, 2002; Granger and Lefer, 2020; Neshkovska, 2019), since they help translators incorporate natural, native-like collocations and phrases into particular communicative situations.

The second research question focused on which type of collocation can best benefit from using mobile translation applications in translation. The results indicated that using mobile translation applications was effective in the translation of fixed and medium-strength collocations compared to weak collocations. This can be attributed to the fact that fixed and medium collocations are used more in the corpus, which leads to a more accurate translation by mobile translation applications. Conversely, the words in weak collocations can be accompanied by many words; therefore, it is not easy for mobile translation applications to anticipate accurate translation. Many researchers, e.g. Shraideh and Mahadin (2015) and Obeidat and Sepora (2019) recommended that Arab translators should focus on the notion of collocation before the process of translation and provide additional training to translation students to enhance their ability to translate weak collocations.

The third research question explored the translation direction that can be enhanced with mobile translation applications (i.e. from Arabic into English or from English into Arabic). The results indicated that there was no significant difference between the performance of participants who used mobile translation applications for translating sentences from English into Arabic or vice versa. This indicates that mobile translation applications can be used effectively in both directions. The study results confirmed the findings from other studies encouraging the use of technology, in general, to enhance translation, and mobile translation applications specifically. These tools can be integrated successfully into translators' training classrooms where instructors and trainees can develop the skills to use these technologies effectively. Notably, this recommendation is supported by studies that have examined the use of similar technologies in translation classrooms (Bahri and Mahadi, 2016; Sazdovska-Pigulovska, 2018; Javadi and Khezrab, 2020; Yahya *et al.*, 2020; Alhassan *et al.*, 2021).

6. Conclusion

This study adds to the growing body of literature regarding the benefits of using mobile applications for translation. The study concludes that using mobile applications for translating collocations were more effective than traditional approaches. In addition, the use of mobile translation applications was more effective in the translation of fixed and medium-strength collocations than in weak collocations. Furthermore, mobile translation applications can be effective either in translating collocations from Arabic to English or vice versa. This study suggests that integrating translation technologies in general and mobile translation applications in particular in translation can enhance the translation process. Students can utilize mobile translation applications to enhance their translation skills, especially in translating collocations. However, users need to be aware of the advantages and limitations

of these tools, and they need to develop the required skills to edit their output to enhance translation quality.

Future research needs to focus on issues related to the use of mobile translation applications in different structures of the target language. For example, another investigation can be conducted to examine the effect of mobile translation applications on idioms, proverbs, etc. A key issue that can be explored is the use of mobile translation applications on various text genres (e.g. religious, political and legal texts). It is essential to note that the study findings should be viewed within the context of their limitations. One of these limitations is the number of participants, which can affect the generalization of results. Further research is nevertheless needed with a larger sample. Since only one mobile translation application was used in this study (i.e. Reverso), more mobile translation applications can be explored comparing their different abilities and their impact on translation quality.

Notes

1. https://www.reverso.net/
2. https://apps.apple.com/sa/app/reverso-translate-and-learn/id919979642

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Appendix
The sentences used in the translation test

English sentences

1. We must seize the opportunity when it comes
2. It is hard to know about the hour of decision
3. The contract has terms and conditions
4. We are making progress on the project at work
5. I will stand with you secretly and publicly
6. My daughter gets alarmed by the creaking of the door
7. They do a lot of hard labor
8. My child wins confidence
9. I heard the bees buzz on the farm
10. I found a cake of soap on the ground
11. Would you like to open an account at our bank?
12. My wife remained in a deep sleep
13. It immediately broke a record by pulling 13.9 million viewers
14. After I finished my errand, I took a bus home
15. Some people do not take enough risks in life

Arabic sentences

16. الحكومة سنت قانونا لمكافحة الرشوة
17. قابلت صديقي بالمصادفة في حفل زواج أحد اقاربي
18. اشتريت طقم من الكؤوس لحفل التخرج
19. تلك الفتاة جمالها فتان
20. اصدرت المحكمة حكم الاعدام على القاتل
21. هجرة الادمغة اصبحت ظاهرة مقلقة
22. تم استقبال الرئيس استقبال حار
23. فقدان الذاكرة مرض يصيب الكثير من كبار السن
24. هو معنا قلبا وقالبا
25. رأيت قطيعا من الماشية
26. هل ممكن أن تقدم لي خدمة؟
27. لقد أعطيت فرصة للحديث عن نفسي
28. مفتاح النجاح هو أن تعير الموضوع اهتمامك
29. لقد اتخذت الحكومة قرار بشأن هذه القضية
30. اقسم الشهود أن يقولوا الحقيقة

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