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## Machine Translation Problems in English-Arabic Collocations and Post-Editing: Google Translate as a Case Study

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### Abstract:

Every language has its own collocations and fixed expressions that represent its related culture and ideological, social, and religious differences. In the field of translation technology, although there have been developments in Machine Translation (MT), problems still exist, particularly when translating English collocations into Arabic. This paper aims to investigate the stylistic problems in (Google Translate) outputs from English into Arabic when translating collocations in a scientific(semantic) context and stand on the limits and strategies of Machine Translation from the perspective of language and thought production, also to reveal the extent to which one of the neural Machine Translation programs (Google Translate) can translate scientific texts from English into Arabic, which include many collocations extracted from Ogden and Richards' (1946) linguistics text, *The Meaning of Meaning: A Study of the Influence of Language Upon Thought and the Science of Symbolism, with Supplementary Essays*. Furthermore, it highlighted the stylistic problems in collocations when translating. In addition, it aims to Post-Editing output of Machine Translation according to the rules of translation quality and acceptability. The study adopts the comparative analytical approach for the data collected from the Google Translate (2021) output, thus comparing it to human translation, then applying Post-Editing to these outputs. The results indicate that Google Translate fails to utilize the appropriate technique(s) when it renders metaphors from English into Arabic because it lacks the required profound knowledge of the linguistic and cultural legacies of both the source and target languages. Also, Google Translate output of collocations within a scientific text need a fully Post-Editing with a revision.

**Keywords:** collocations, English to Arabic, Google Translate. Machine Translation.

## مشكلات الترجمة الآلية للمتلازمات اللفظية من اللغة الإنجليزية إلى العربية والتحليل اللاحق: ترجمة جوجل أنموذجا

### Machine Translation Problems in English-Arabic Collocations and Post-Editing: Google Translate as a Case Study

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لكل لغة تعابير راسخة تضم بعض المتلازمات اللفظية التي تمثل ثقافتها، واختلافاتها الأيديولوجية، والاجتماعية والدينية. وعلى الرغم من التقدم الهائل في مجال تكنولوجيا الترجمة ولا سيما في ميدان الترجمة الآلية (MT)، لا تتفك المشكلات عن الظهور والتوالد خاصة عند ترجمة المتلازمات اللفظية من اللغة الإنجليزية إلى العربية. فتهدف هذه الورقة إلى تحري المشكلات الأسلوبية في مخرجات (Google Translate) من الإنجليزية إلى العربية عند ترجمة المتلازمات اللفظية في سياق علمي (دلالي)، والوقوف على حدود واستراتيجيات الترجمة الآلية من منظور لغوي، وإنتاج فكري، كذلك تروم الورقة الكشف عن مدى قدرة أحد برامج الترجمة الآلية العصبية (Google Translate) على ترجمة النصوص العلمية من الإنجليزية إلى العربية، والتي تتضمن العديد من الأساليب الخاصة في نصوص من كتاب، (معنى المعنى: دراسة عن التأثير اللغوي عند الفكر وعلم الرمزية، مع مقالات تكميلية، للمؤلفين: Ogden and Richards (1946)، أيضا هدفت إلى تحرير مخرجات الترجمة الآلية وفقاً لقواعد جودة الترجمة والمقبولية. وتتبنى الدراسة المنهج التحليلي المقارن، حيث تحلل المخرجات ثم تقارن بالترجمة البشرية للكتاب المترجم، أخيراً تحرر مخرجات ترجمة جوجل تحريراً لاحقاً كاملاً. تشير النتائج إلى أن Google Translate فشلت في استخدام الاستراتيجيات المناسبة لترجمة المتلازمات اللفظية من الإنجليزية إلى العربية؛ إذ إنها تقتصر إلى المعرفة العميقة المطلوبة بالموروثات اللغوية والثقافية لكل من لغتي المصدر والهدف. أيضاً، توصلت الدراسة إلى أن مخرجات Google Translate تتطلب تحريراً لاحقاً كاملاً.

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## Introduction

Machine Translation has for some time been a pivotal area in translation studies due to the witnessed development in the field of translation technology. Although Machine Translation (MT) has developed in that field, problems still exist. This study deals with a high-quality MT program, known as fully automatic high-quality translation (FAHQT) (Hutchins & Somers, 1992, p. 57), in which the original text is entered in one language and its equivalent is produced in a second language without the need for any type of pre- or Post-Editing (Granell, 2014). This paper discusses the output of Google Translate 2021 in English-Arabic collocations and argues that Google Translate (2021) fails to utilize the appropriate technique(s) when rendering metaphors from English into Arabic as this requires profound knowledge of the linguistic and cultural legacy of both source and the target languages. As a rule of thumb, when such collocations appear in the source text, translators should seek to render them in such a way that runs in line with the target language's cultural and linguistic norms. Moreover, it presents a contrastive analysis of the human translate and Post-Edited output of Google Translate, it also claims that Google Translate (2021) is incapable of dealing with the grammatical and idiomatic collocations and translating them properly into Arabic.

On one hand, Google Translate was selected as the case study for this paper for many reasons. First, Google Translate uses a neural Machine Translation system (NMT). Google's NMT improves translation quality by making sense of languages and looking at entire sentences rather than translating individual words (Futures Centre, 2021). Second, in the last 10 years, Google Translate has grown from supporting just a few languages to supporting 103 languages; and it translates over 140 billion words every day (Google AI Blog, 2021). Substantial, Google Translate is fast and cost-effective (Spreeman, 2017). The book, *The Meaning of Meaning: A Study of the Influence of Language Upon Thought and the Science of Symbolism, with Supplementary Essays* (hereafter, *The Meaning of Meaning*) (Ogden & Richards, 1946), has been chosen as the study sample because its authors were influential English literary critics and rhetoricians. On another hand, a collocation constitutes a lexical relationship with its own tendencies, and its semantic meaning cannot be comprehended or derived by simply using a dictionary to look up the definitions of its constituent parts (Nofal, 2012).

Consequently, this highly precise linguistic sample presents a strong challenge for Machine Translation and is used in this study to analyze appropriate collocations translation strategies for translating English into Arabic using Google Translate (2021). It also illustrates the type of Post-Editing that Machine Translation entails when dealing with such high-linguistic quality texts. The study also examines translation of collocations with respect to their communicative function. It is significance for translators to utilize the most relevant technique(s) for their translation context because each language has its own collocations, which often pose a challenge for both MT and human translation (HT).

The study focuses stems from two essential questions: What are the stylistic problems in Google Translate (2021) outputs from English into Arabic when translating collocations in a scientific context? and What type of Post-Editing does the MT outputs require to be usable? This study is based on a theoretical perspective that supports the applied perspective, while the theoretical aspect is represented in three sections: First: Clarification of the different sub-categories of collocations that the study deals with: metaphorical, idiomatic (proverbs and sayings), and grammatical (verb + noun). Second: the criteria that must be considered when translating collocations. Third: Definition of Post Editing and its types.

### **Significance of the Study**

The world has become increasingly digitized, and many professionals and researchers find it necessary to search for information in multiple languages. Therefore, the need for Machine Translation rely on Artificial Intelligence (AI) has turned into an undisputed urgency, particularly when collocations are involved. Translation of collocations has long been an obstacle and a real challenge in the field of translation theory (Ghazala, 2008). Indeed, every language has its own collocations and fixed expressions that represent its culture and ideological, social, and religious differences.

Thus, the importance of collocations lies in the functions they perform in understanding and assimilation and the various roles assigned to them, whether it comes to learning languages or not by translating. Translating collocations is worth mentioning, since there is no basis at all for it, including idioms when there are no clear equivalents for collocations and idioms in target language (TL) (Al-Jaradi, 2015). In

addition, it can be claimed that the strategy for translating a particular idiom is chiefly adopted count on the characteristics of the translation's target audience. Consequently, translating these idioms can pose a real challenge for translators, some of whom choose appropriate strategies while others fail to do so. Because this paper discusses some of the obstacles that Google Translate (2021) encounter when translating proverbs and wisdom from English into Arabic. Although, some idioms are used in context the meaning of these idioms can be non-linguistic or extra-linguistic according to the different linguistic scholars who have categorized meaning types in their own ways. Some of these scholars have spoken in general terms while others have used more certain classifications (Baker, 1992; Shojaei, 2012). This study was developed to determine the strategies used in human-edited and unedited Google translations to convey these collocations from English into Arabic in an accurate and intelligible way. As a result, the study identified translation strategies used by human translators and human editors to find the most natural and accurate way to translate collocations and communicate their meaning in TL.

This led to the emergence of the topic of this study, which attempts to identify the problems that hinder Google Translate from properly translating collocations as well as identifying the Post-Editing strategies for Google Translate output that allow the translation to convey the intended meaning.

### **Purpose of the Study**

A major problem identified in this study is that incorrect English-Arabic MTs of collocations make the text appear foreign and exotic to the target reader, which may negatively affect its comprehensibility. Therefore, this paper highlighted the stylistic problems in collocations when translating, and it aims to Post-Editing output of Machine Translation according to the rules of translation quality and acceptability. In addition, this paper aims to stand on the limits and strategies of Machine Translation from the perspective of language and thought production, and to reveal the extent to which one of the neural Machine Translation programs (Google Translate) can translate scientific texts from English into Arabic, which include many collocations extracted from Ogden and Richards' (1946) linguistics text, *The Meaning of Meaning: A Study of the Influence of Language Upon Thought and the*

*Science of Symbolism, with Supplementary Essays*. Furthermore, it seeks to determine the strategies that Google Translate applies when translating collocations within a linguistic context as well as in human Post-Editing of Google Translate. The study also investigates specific techniques that should be applied to Post-Editing Google Translate (2021) output when translating idiomatic and metaphorical collocations.

### **Literature Review**

The literature review in this paper is divided into two parts: the first is studies related to the translation collocations, for instance, Alwazna (2018), who focused on the concept of collocations and studied them from theoretical aspects, and Talebi (2008) used the Cestran system to translate collocations. The second part of the literature review is studies relating to Machine Translation and post-editing Machine Translation (PEMT), for instance Wu et al. (2016), who described in detail the implementation of Google's Neural Machine Translation (GNMT) system, including all the techniques critical for its accuracy, speed, and robustness. In addition, (Vieira & Alonso, 2020) have reported that MTs can generally introduce misperceptions and miscommunication into professional translations. As well as have revealed many MT problems in English-Arabic collocations that should be of linguistic and cultural significance. Furthermore (Karjo & Metta, 2019) have also reported that Google Translate needs improvement in translating collocations, this improvement, according to King (2019), will only happen if engineering and computational linguistic departments can understand and seek training in artificial intelligence technology, neural Machine Translation, and algorithms and their codes, allows neural Machine Translation to evolve. in contrast, (Wang et al., 2021) study aims to denote merits of Machine Translation and Post-Editing over traditional translation is an empirical study on trainee translators.

As for this study, it differentiates in its content and methodology, it translates collocations within a scientific text from English into Arabic by NMT. It does not stop at this limit, but rather goes beyond it to PE which emphasizes adopting an appropriate strategy for translating collocations in the various linguistic contexts of an entire scientific document. On the other hand, this study is distinguished by its methodology, it is the comparative analytical approach that compares the quality of HT and MT before and after PT.

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## Methodology

This study adopted the comparative analytical approach to the data collected from the output of Google Translate (2021) and its human post-editing.

A fifteen-page sample was selected from the first chapter of Ogden and Richards' (1946) book, *The Meaning of Meaning*, the whole sample was then downloaded to Google Translate as a translatable document. Afterwards, the output of the Machine Translation into Arabic is detected, and the linguistic and stylistic errors that Google Translate (2021) suffers from are identified. Last but not least, the full Post-Editing required by Google Translate of the selected text that involves idiomatic and metaphorical collocations begins, Specific techniques and strategies are, then suggested that should be applied to Post-Editing MT. The final step is to compare the human translation (HT) that was done by Kenan Al-Zubaidi, the translator of the book "The Meaning of Meaning" into Arabic with MT output after and before post-editing.

Translation editing based on Translation strategies and theories on the one hand, and on the other hand on the context, The criterion for selecting one correct translation over another was to try to get to the deep structure closest to the context-appropriate content in the view of the researcher.

### The theoretical framework

#### Types of collocations in *the Meaning of Meaning*

Linguists interested in collocations, classifying, and combining them into several types in printed or electronic dictionaries Mohammed (2003), (Oxford Learners Dictionaries). Therefore, a collocation is commonly defined as "a combination of words in a language, that happens very often and more frequently than would happen by chance" (Oxford Learners Dictionaries), and "the occurrence of two or more words within a short space of each other in a text" (Sinclair et al., 1991, p. 170). In (2008) Ghazala propounded that collocations include several types of idiomatic collocations as is following: metaphors, proverbs, and grammatical collocations. So, "An idiom is a group of words which have a different meaning when used together from the one they would have if you took the meaning of each word separately C. E. Dictionary (2020) These idioms can fluctuate from a single word to a complex sentence as

well as they are brief, consistent, unchanging, and use analogy or metaphor (Ghanou & Wasou, 2016). As a matter of fact, idioms are considered a figure of speech which is reflected in various categories, such as clichés, proverbs, and jokes. Further, the metaphor is a figure of speech in which a word or phrase is applied to an object or action that it does not literally denote to imply a resemblance (Colins Dictionaries, 2022) as well as it is an imaginary style of describing something by referring to something else for the purpose of non-explicit simile (Al-Jurgani, 1902). On the other hand, a proverb is a rhetorical device, generally used within a particular society (Chahboun et al., 2016). It is an indirect common feature in these expressions is that they describe a common truth about an experience and become wise sayings (Ghanou& Wasou 2016). Although proverbs are a kind of wise expression, they are not the same as wisdom, which is based on the vision of a wise man (Khaki, 2014). Because proverbs and wisdom are closely associated with a society's culture and its geographic, religious, social, and linguistic differences. As for grammatical collocations are two or more words that have a syntactical relationship. It is noticeable that many Arabic collocations have been infiltrated by foreign languages in a variety of scientific, literary, and artistic fields until they have become typical to Arabic style (Ayyad, 1992; Fayed, 2011). Due to their circulation in Arabic, grammatical collocations have been classified into many types (Ghazala, 2007, pp. 12, 17):

- 1)Verb + noun (subject or object) collocations
- 2)Adjective + noun collocations
- 3)Noun (subject) + verb collocations
- 4)Verb + adverb collocations.

This paper will focus on the grammatical collocations of verb and subject only.

### **Important Techniques when Translating Certain Collocations from English into Arabic**

It is important to deem whether the collocation in the quoted text appears as a separate title in the source target (ST), either introductory or explanatory, and whether it occurs within a larger context, appearing before or after the quote. Additionally, analysts should consider whether the purpose of the quote is to underscore and highlight a theory that will



ensue thereafter or to build suspense, in addition to stirring the readers' thoughts about what is to come. If so, the quote must be translated literally and effectively (Newmark, 1981) because using any other translation strategy would defeat the purpose of creating suspense, which was the original intent of the quote. Furthermore, from my point of view any translator must assess how appropriate the quote is in terms of the culture and religious beliefs of the Arab society or another target audience (Barragán, 2017). For example, it is not appropriate to use a French proverb that does not align to Arab morals in a book that targets Arab readers. In fact, the intended meaning may be misunderstood or even completely lost because of the inappropriateness of certain types of collocations such as proverb.

Additionally, some experts allow adopting a literal translation if the collocations or proverb is figurative in the ST (AL-Jaradi, 2015). The image may be transferred to the Target text (TT) after careful consideration of the context .

However, the field the TT is from must be considered, as well as whether it is scientific or literary in nature. This is because some collocations are field-specific; for example, those used in the field of law may not be used in the field of history. Moreover, collocations used in formal registers are not appropriate in colloquial speech (Newmark, 1988) .

Therefore, it is vital to consider how the sender and recipient express feelings in the ST language and how this can be transferred successfully into the TL. For example, English speakers tend to express their feelings in a subdued manner. They also avoid direct expression and often use hedging (Anani, 2000). When the translator transfers the text to or from Arabic, this difference must be considered because Arabs tend to express feelings more vividly.

### **Types of Post Editing Machine Translation**

Post-Editing (PE) “is the correction of raw machine-translated output by a human translator according to specific guidelines and quality criteria “(O’Brien 2011: 197-198). Accordingly, Post-Editing requires a trained professional who is fluent in both languages, in addition to his ability to deal with various translation technologies such as: translation memories, and Computer aided translation (cat) tools. In fact, it is a field in which the translator interacts with the machine, and in which

translation studies conjoin with Machine Translation (TAUS 2019). From (Allen, 2003) point of view PE is divided into three degrees: light, minimum, and full post-editing. However, (Nitzke & Schirra. 2021) reported that PE include some dichotomies, light and full post-editing, monolingual vs. bilingual post-editing, Post-Editing vs. interactive MT editing. Furthermore, the task of Post-Editing is based on the principles of the following: the editor decides which Machine Translation quality to work with. Where there is a level called “good enough quality”, which needs (Light PE), in which the editor works to modify the content of the text so, it should be comprehensible and accurate, the editor's job is to focus on the semantic level, making sure that no information from the ST is accidentally added or deleted by mistake (O’Brien, 2005). He will edit any content that is offensive, inappropriate, or culturally unacceptable. Also, he must use as much raw MT output as possible because the reason behind implementing PEMT is to save money and time and thus get more productivity. Light PE increase the quality and acceptability of MT output, which further led to higher satisfaction. (O’Brien 2007; Guerberof 2009). Additionally, the editor must apply the basic spelling rules, there is no need to make corrections that consider stylistic quality or textual coherence, as well as no need to restructure sentences solely just to improve text fluency. This means that the text may appear unidiomatic and unnatural as it is generated by a computer. in contrast, the full PE requires a high-quality translation that can be achieving quality that is similar or equal to human translation. Besides being used and posted (Nitzke & Schirra. 2021).

### **Data Collection and Analysis**

The data for the sample are collected from the Google Translate output derived from the first chapter of Ogden and Richards’ (1946) book, *The Meaning of Meaning*, and introductions to the 10 chapters of the same book which should involve authentic and scientific (semantics) translation from English into Arabic to serve Arabic readers. After extrapolating and examining all ten chapters of the book, it clears that they all begin with quotes, which are wisdom, proverbs, idioms, poetry or prose taken from the holy books. The data presentation highlights the output errors that emerge from Google Translate (2021) use of specific strategies when translating idioms and stylistic phenomena. Style, in this case, represents a particular language’s preferences for and arrangements

of a certain number of language constituents that have a particular meaning in use, whereas other language constituents have the same meaning but are not selected (Maslooh, 1992).

### Discussion and Analysis

#### Problems with MT in English-Arabic Collocations (Metaphors)

Table 1 The Problem with Machine Translating Collocations (Metaphors)

Source Text	Target Text		
	Machine Translation (Google Translate)	Human Translation	Google Translate post-edited by a human (the author)
Let us get nearer to the fire, so that we can see what we are saying. (Ogden & Richards, 1946, p. 1)	دعونا الحصول على أقرب إلى النار، حتى يتسنى لنا أن نرى ما نقوله (Google Translate, 2021)	لندد قريبا من النار حتى نستطيع رؤية ما نقول (Ogden & Richards, 2016)	إن الوقوف على مباحث علم المعنى وعلاقته بالأشياء والكلمات مطلب وعر خطر، سنخوضه لنستنتج منه ما نرتضيه

As seen in the previous Table 1, the example presented from the ST is a figurative expression, so the first chapter begins with “‘Let us get nearer to the fire, so that we can see what we are saying’ was written by Bubis of Fernando Po” (Ogden & Richards, 1946, p. 57). The translation of this expression into the Arabic language as output by Google Translate is as follows:

“دعونا الحصول على أقرب إلى النار حتى يتسنى لنا أن نرى ما نقوله” (Google Translate, 2021)

In contrast, human translation is as follows:

: " لنزدد قربا من النار حتى نستطيع رؤية ما نقول" (Ogden & Richards, 2016, p. 2)

Evidently, the strategies used to translate the quote were interlinear and literal translation. Indeed, interlinear translation is most comparable to the source language (SL). Hence, it has grammatical units corresponding as closely as possible to every grammatical unit of the source target (ST) (Dickins et al., 2016, p. 15). Interlinear translation aims to shed light on the structure of the ST, transfer its constituents' word for word, and retain all parts of speech, including prefixes and suffixes, accurately, even if they do not respect the rules of the target language (TL). This is because interlinear translation serves readers who are interested in knowing about the source language and its structure rather than its semantics. In contrast, literal translation seeks to transfer the denotative meaning of words as if they are taken straight from the dictionary and out of context, thereby respecting the TL's grammar (Dickins et al., 2016, p. 16). In other words, text is translated word by word, disregarding the pragmatism level and focusing only on the syntagmatic level of the TL.

Consequently, it is important to conduct grammatical transposition from the ST to the TT (Munday, 2016). According to the explanation given by Newmark (1981), literal translation is closer to semantic translation than communicative translation (free translation) (Izza, 2010).

Therefore, a different strategy, such as translation descriptions and explanations, may be applied in this case. This is a strategy often used to translate idiomatic expressions and other phrases that do not have a direct equivalent in the target language. It is known as a lexical expansion because it usually takes the form of definitions and explanations in the target text—in the body of the text, as a footnote, as an endnote, or in the glossary (Al-Wazna, 2014). Nevertheless, details that may not exist in the ST are added in the TT. If this strategy is used with the aforementioned quote, the translation would become:

“إن الوقوف على مباحث علم المعنى وعلاقته بالأشياء والكلمات مطلب وعر وخطر، سنخوضه  
لنستنتج منه ما نرتضيه.”

However, when using this translation strategy, the target text loses its metaphorical expression and functional and pragmatic dimensions. The connotative meaning of this idiom includes simile, the in-depth study of the meaning of approaching fire, the similarity as a risk, and the difficulty facing one who gets closer to a fire.

Thus, this paper purports -. after extrapolating and examining all ten chapters of the book- that literal translation is the most suitable strategy when translating the chapter introductions in the book, *The Meaning of Meaning* (Ogden & Richards, 1946), as it achieves the intended meaning and imagery. Indeed, it is the strategy used most often by Google Translate and human translators, such as Al-Zubaidi in his translation of the chapter introductions. This is because the translated text would lose its intended rhetorical and semantic value if translated via any other strategy. Moreover, the authors of *The Meaning of Meaning* themselves tried to preserve the structure of the quotes as they appeared in their original languages when they were translated into English, especially as some collocations were translated from other languages—for example, Chinese—into English and then from English into Arabic .

Therefore, literal translation was considered the best solution to translation barriers. On the other hand, previous studies have argued that the communicative translation strategy is best because it accounts for the cultural and religious heritage of Arabic society as the target audience (Dickins et al., 2016). Additionally, one of the important criteria of the process of translating figurative language is expression transparency and its compatibility with Arab readers' comprehension. If a communicative translation strategy is used to translate the quote, the translation would be as follows:

دعونا نلعب بالنار وبذلك نحقق ما نريد استنتاجه،

This semantically means, “let us play with fire so that we can achieve what we want to conclude.” This translation obtains a metaphor equivalent to that in the source text. Thus, the English language (Chahboun et al., 2016) and the target language (Dictionary of Almaany) share a familiar metaphor .

Ultimately, MT is unable to apply the correct technique to yield accurate translations of metaphors. This is because the translation process requires deep knowledge of the linguistic legacy of the TT language, taking into consideration the real tasting of language by the Arab reader, the reader's ideology, and the reader's beliefs. Moreover, metaphor is a rhetorical art that necessitates imagination and embodiment with a literary meaning that differs greatly from one language to another. In other words, metaphors translated via MT need to be edited by a human.

**Problems with MT in English-Arabic Idiomatic Collocations  
(Proverbs and Sayings)**

Table 2 The Problem with Machine Translating Collocations (Proverbs and Sayings)

Source Text	Target Text		
	Machine Translation (Google Translate)	Human Translation	Google Translate post-edited by a human (the author)
<b>The influence of language upon thought has affected the attention of the wise and foolish alike, since Lao Tse came long ago to the conclusion—“He who knows does not speak, he who speaks does not know” sometimes, in</b>	وقد TFIE تأثير اجتذب اللغة على الفكر انتباه حكيم وأحمق على حد سواء، منذ لاو تسي منذ فترة طويلة إلى هو " conclusion- الذي يعرف لا يتكلم، وقال إنه يتحدث لا يعرف " في بعض الأحيان، في الواقع، الحكمة في هذا المجال أثبتت نفسها أكثر حماقة (Google	إن أثر اللغة في الفكر قد استحوذ على اهتمام عقلاء الناس وحمقاهم على حد سواء، منذ استنتج لاو تسي Lao Tse في الماضي البعي د" أن الذي يعلم لا يتكلم وأن الذي يتكلم لا يعلم.	وقد جذب تأثير اللغة على الفكر انتباه كلا من الحكيم والأحمق على حد سواء، ففي الماضي منذ أن توصل (لاو تسي) إلى نتيجة فحواها: "إن السكوت من ذهب، ومن كثر كلامه كثر سقطه" في الحقيقة، أحيانا أثبت الحكماء أنهم كانوا من أشد الناس حمقا بسبب كثرة حديثهم في هذا

fact, the wise	Translate, 2021)	والحق أن العقلاء قد	المجال.
have in this field		أثبتوا	
proved		أحيانا أنهم في هذا	
themselves the		المضمار من أشد	
most foolish.		الناس	
(Ogden &		Ogden & ) (حمقا	
Richards, 1946,		(2016) Richards	
p. 1)			

As seen in the previous Table2, the example presented from the ST is a wise saying of Tao Te Ching (Chia, 2003), an ancient Chinese philosopher and the father of Taoism (Ogden & Richards, 2016). The quoted text consists of two complex sentences with two subordinates beginning with the pronoun “who” in the main clauses, which begin with pronouns. The pronoun “he” is the subject of each sentence. The predicate in the first sentence is a negative composed of a main verb negated by an auxiliary structure, creating the negative verb “does not speak.” The predicate in the second sentence is also a negative composed of a main verb negated by an auxiliary structure, yielding the negative verb “does not know.” The two sentences resemble one another structurally and rhythmically. Both sentences are brief as they aim to communicate a great deal using the fewest number of words possible, as is customary in idioms (Khaki, 2014) .

In contrast, the output of Google Translate (2021) as a TT seems similar in structure to the ST, as both are made up of two conjunctive sentences, although the sentences differ in structure. The first sentence consists of a main clause and two subordinate clauses. The main clause comprises a subject and a pronoun “هو” or “he,” complimented by the relative clause “الذي يعرف” or “who knows,” followed by the negative verbal sentence “لا يتكلم” or “does not speak.” The second sentence, which is linked to the first by the conjunction “and” or “و,” consists of a verbal sentence beginning with the verb “يقول” meaning “to say,” followed by a sentence stating what has been said. This comprises “قال إنه” or “said that he.” There are two predicates for this sentence: the first is a positive verb

sentence ” يتحدث“ or ”speaks,” and the second is a negative verb ” لا يعرف“ or ”does not know ”.

Therefore, it is evident that Google Translate (2021) used a proper literal translation strategy to translate the text. It attempted to adapt the text to make it appropriate in the Arabic style. For instance, the translation begins with the verbal sentence, and it joins the two sentences using the conjunction ” و“ or ”and.” According to the authors (Dickins et al., 2016) of Thinking Arabic translation, Arabic sentences are often longer and use connectors more widely than English sentences and texts. In many cases, English disposes of conjunctions and relies solely on punctuation to connect sentences (Dickins et al., 2016). Therefore, the use and repetition of punctuation marks differs between the two languages. The translation added the verb ”to say (”وقال”)” although it does not exist in the ST. The researcher believes that this verb was an intentional addition by the MT, as it appears to be referring to the previous text. In this way, the translated text matches the Arabic text as a TT. In contrast, the idiomatic expression is translated using literal translation, excluding the verb ”قال.” Indeed, by adopting the literal translation strategy, Google Translate (2021) faces a stylistic problem. This is because literal translation does not consider the idiomatic meaning that exists in the proverb or wisdom. Because an idiomatic translation strategy considers idiomatic meaning, the idiomatic meanings that are used when translating in general are different from those of an idiomatic translation. In other words, idiomatic translation considers the terminology and the linguistic, cultural, and functional equivalent of the target language so that it is accurately written in that language (Floor, 2007) .

Consequently, when Google Translated the quoted proverb, it lost its intended meaning and desired effect (Ghazala, 2008). The English reader of the ST is aware that the quoted text is a well-known proverb and is sure about its legitimacy. However, the Arab reader of the translated text feels as if the quoted text is new, unknown information. This is because it is not part of the target reader’s culture or experience, which may lead the reader to doubt the text’s credibility. Substantial recent evidence has suggested that the same set of words and expressions in one language may seem vague and, in some cases, nonsense to speakers of another language. This originates from the fact that each language has some culture-specific items that are distinct from the corresponding items in another language. Furthermore, there are some differences in factors



such as religion, geographical location, ideologies, and social classes of languages (Shojaei, 2012). However, the post-edited Google Translate (2021) translation in the example is made up of two joined sentences. The first sentence begins with ”إن،“ which may be translated into English as “that,” followed by the subject ”السكوت“ and the prepositional phrase ”من“ ”ذهب.“ The second sentence is a conditional sentence beginning with ”من“ and followed by a conditional clause ”كثير كلامه“ and a main clause ”كثير سقطه.“

Thus, the excerpted idiom as a collocation lost its meaning, intended purpose, and communicative function in translation. To resolve this, the post-edited Google Translate translation was produced using a different strategy for translating the quoted proverb—collocations. The first step was to understand the intended meaning of the idiom with regard to the rest of the text. In other words, the translation must begin by discerning the purpose behind including the proverb in the text in the first place. The second step was to refer to reliable Arabic linguistic sources and collocations dictionaries to look for Arabic idioms with similar meaning that could serve a similar purpose as that of the quote, blending it effectively within the context of the translated text (Talebi, 2008). Furthermore, Baker (1992) recommended four problem-solving strategies to overcome the difficulties of idiomatic translation: using an idiom of similar meaning and form, using an idiom of similar meaning but dissimilar form, translation by paraphrasing, and translation by omission. However, Google Translate (2021) does not utilize any of these solutions to solve translation problems in proverbs as idioms.

The purpose of the proverb within the greater context of the ST was to highlight that the large number of statements about the study of meaning and their relationship with things both materialistic and abstract, whether they are attributed to experts or fools, has led to an increase in the possibility of error in this area. Therefore, it is suggested that all should keep silent, especially experts. In the search for a suitable equivalent, two proverbs that would be familiar to Arab readers were chosen:

”إن السكوت من ذهب، ومن كثير كلامه كثير سقطه.“

which semantically means “silence is golden, and he who speaks often, stumbles often.” The first saying is part of a conventional phrase that has become a popular proverb (Ghazala, 2002.). According to Al-

Ghazali (2005), this saying is attributed to the prophet Suleiman Bin Dawood. It appears to be made up of two sentences :

“إن كان الكلام من فضة، فالسكوت من ذهب.” (Al-Ghazali, 2005, p. 998).

This is written semantically meaning “if words are made of silver, then silence is golden” (Gazala, 2002). The post-edited translation demanded that the second part of this well-known saying allude to the meaning of the original text, creating “he who knows does not speak” instead of interfering in what does not concern him .

The second part of the translated collocations, “he who speaks does not know,” relies on the idea that whoever talks a lot does not actually know much. Although it is not stipulated in the quote that there has been too much talking, the quantity is understood from the context, as excess is often reprimanded. To evoke this meaning, a well-known expression attributed to Omar Bin Al-Khattab was used in the translation :

This semantically means “he who speaks often, stumbles often” (Al-Busti, 2013, p. 44). In addition, another idiom is equivalent and similar in content to the ST’s idiomatic expression, but differs in composition :

“خير الكلام ما قل ودل”

semantically meaning “less is more” (Al-Juathen, 2013). Indeed, it was excluded from the edited translation because the structure is different from the structure of the ST. This translation strategy is known as communicative translation and is used to translate proverbs, common expressions, and clichés where the semantic meaning takes precedence over the literal meaning (Izza, 2010). This strategy is also used when the ST is in a language of a different social and cultural system than the language of the TT. In such cases, an analogy is preferred (Dickins et al., 2016) .

In other words, the translator (Machine Translation editor) searches for a proverb in the TL that has a similar meaning to that of the ST—one that is better suited to the culture of the target audience. However, it may be edited or changed so that the meaning is customized to match the proverb in the source language. This may include adding or subtracting elements or changing the structure slightly (Ghanou & Wasou, 2016). If the translator cannot reach the functional equivalent, the translator should paraphrase the idioms or explain the content as follows: silence is surely better than speaking if a person does not find the right opinion, or

frequent speech, even if it is from scholars, indicates foolishness. Any attempt to deceive the listener and all these sayings would be useless compared to a few words indicating the right opinion. Whereas, if we look closely at the human translation, we will find that the translator followed the strategy of literal and free translation, in addition to Foreground and Background translation, which achieved equivalence between ST and TT in synthesis and expression, but the saying in this text did not achieve equivalence in impact and the function of the target reader in the target text

Last, literal translation by MT may be accepted as the least effective solution. As mentioned above, other strategies were used in the remainder of the text, namely translation by addition, translation by omission, and foregrounding and backgrounding translation. This combination of strategies aimed to achieve the intended meaning of the quote, to ensure a good flow with the rest of the text, and to bridge the gap between the target reader's culture and that of the source reader (Al-Jaradi, 2015). The communicative translation intended to render a rhetorical effect in the English proverb that was compatible with the Arabic proverb(s). Such alternative idiomatic terms that are synonymous in English and Arabic have been termed idiomatic false friends (IFF) in English and Modern Standard Arabic (Al-Wahy, 2009). Therefore, Google Translate (2021) is incapable of properly translating idiomatic expressions that include proverbs from English into the Arabic language because these expressions represent the culture and background of the Arab nation. Additionally, Google Translate output needs to be post-edited by humans.

**Problems with MT in English-Arabic Grammatical Idiomatical Collocations (Verb + Noun)**

Table 3 The Problem with Machine Translation of Collocations (Verb + Noun)

Source Text	Target Text		
	Machine Translation (Google Translate)	Human Translation	Google Translate post-edited by a human (the author)
<p><b>The grosser forms of verbal confusion have long been recognized; but less attention has been paid to those that are more subtle and more frequent. (Ogden &amp; Richards, 1946, p. 14)</b></p>	<p>الأشكال الأرق من الارتباك اللفظي منذ فترة طويلة معترف بها. لكن القليل من الاهتمام قد حان دفعت لتلك التي هي أكثر دقة وأكثر تواترا . (Google-Translate, 2021)</p>	<p>فقد شُخصت صور أشنع للتخليط اللفظي منذ زمن بعيد، لكن اهتماما أقلّ قد وُجِه إلى الصور التي هي أدق وأكثر تكرارا (Ogden &amp; Richards, 2016)</p>	<p>قد عُرف كثيرا منذ فترة طويلة التباس النماذج اللفظية الأكثر فظاعة، لكن قد أُعير الاهتمام الأقل إلى تلك النماذج الأدق والأكثر تواترا.</p>

Table 2 illustrates that the ST is a compound complex sentence. The first sentence consists of the subject and a comparative adjective (“The grosser forms of verbal confusion”); then, a predicate is presented, consisting of the auxiliary verb “have,” the adverb “long,” and the passive verb “been recognized.” This is followed with the conjunction “but.” In the second sentence, the subject is determined by “less attention,” and the predicate comprises the auxiliary verb “has,” the

passive voice “been paid,” a prepositional phrase, and the dependent clause preceded by “that ”.

In contrast, the Google Translate translation consisted of more than one nominal sentence and comprised a subject and a comparative adjective (منذ فترة طويلة)، an adverbial phrase (الأشكال الأرق من الارتباك اللفظي)، the predicate (معترف)، and a prepositional phrase (بها). Hence, the second sentence started with “but” followed by the subject (القليل)، the prepositional phrase ((من الاهتمام،) the predicate (قد حان دفعت)، and the preposition (التي هي أكثر دقة وأكثر) continuing with the relative clauses (لتلك)، (تواترا). The output of Google Translate (2021) in this example contains many linguistic problems that cause semantic ambiguity. In this regard, the key issue is translating the collocations into the Arabic language in a way that does not consider the traditional meanings or contextual use when combining particular verbs with specific nouns, instead translating each component independently .

The collocation in the ST is “less attention has been paid,” and it is a synthesis of the verb “pay,” which is associated with the noun “attention.” In contrast, there is no collocations in the TT translated by Google Translate because Google Translate used the literal translation strategy, which produced a lexical translation of the verb “pay” as دفعت and the noun “attention” as الاهتمام. However, this did not consider the idiomatic meaning that is commonly known in both languages. Moreover, MT did not seek to determine the functional equivalent for grammatical collocations in the target language (Al-Qasimi, 1979). This is for one of the following reasons .

- 1) The MT was unable to reach the contextual meaning, as demonstrated by Cairns (1988 )
- 2) The MT was unable to achieve the correct structure. Hence, the concept is in the collocations, as it is written in passive voice. Dajani & Ali (2015) contend that the grammatical rules of verb tenses differ between Arabic and English. Thus, when the verb tense is present perfect in the English ST, this tense is emphasized in Arabic as the TT (Burhoumi, 2016).
- 3) The MT does not focus on discovering the deep structure of the ST, which illustrates the semantic dimension. In other words, the intended meaning becomes clear when we analyze the surface

structure and identify the deep structure (Chomsky & Lightfoot, 2002).

In fact, the MT represented in Google Translate cannot apply the communication translation strategy based on finding equal collocations in the target language. This collocation has a new meaning when the verb is combined with the noun, so it deviates from the meaning of its vocabulary “pay” and “attention” to imply the meaning of attracting attention. This MT has caused the TT to lose its pragmatic and aesthetic dimensions. Thus, it did not achieve the intended functional side or effectiveness for the recipients (Al-Wazna, 2018).

On the other hand, the Post-Edited Google Translate (2021) consisted of two sentences: a verbal sentence that began with “قد” followed by the predicate in the passive past tense verb “فرغ” and then the substitution of the omitted absolute object “كثيراً”. It was followed by the adverb “منذ فترة” the subject, and the comparative adjective “النباس النماذج اللفظية الأكثر تطوية”. Accordingly, the second sentence consisted of “لكن” followed by the verbal sentence starting with “قد” and the predicate was the passive past verb “يرغأ” the predicate and comparative adjective “الاهتمام الأقل” and the preposition phrase. Based on this, there is no doubt that the edited Google Translate output was an attempt to improve and correct problems that occur in Google Translate. Thus, it is followed by a type of free translation strategy—communicative translation. However, the Arabic language does not possess an exact equivalent collocation to the English in this instance. Instead, there is a close equivalent “أعير الاهتمام”: This equivalent collocations corresponds with the English collocations in its linguistic function and rhetorical effect as a metaphor that means focusing the senses on a specific idea rather than using the real expression “تم التنبيه”. In addition to using the communicative translation strategy, the “edited translation” followed the foregrounding and backgrounding strategy. The attempt began with the verbal sentence and stated emphasis using the word “كثيراً”. Google Translate substantially failed to achieve the intended meaning of the collocations consisting of a verb plus a noun within the context when translating from English into Arabic.

Whereas, if we look closely at the human translation, we will find that it was distinguished by its high grammatical and semantic quality, appropriate strategies were followed for each composition such as a free translation, Foreground and Background Strategy, which achieved a direct conceptual impact on the Arab reader.

substantially, Google Translate demonstrated incompetence in finding an appropriate equivalent collocation in Arabic as a target language, but the human post-edit of the Google Translate output contained all the requisite information.

### Conclusion

This study determines the definitions of metaphorical collocations (metaphors) and idiomatic collocations (idioms) in *The Meaning of Meaning*, as well as grammatical collocations (verb + noun). Specific techniques and strategies have been suggested that should be applied to Post-Editing Google Translate (2021) output when translating idiomatic and metaphorical collocations. MT problems from English into Arabic were discussed and analyzed as they relate to three different subcategories of collocations: metaphorical, idiomatic, and grammatical (verb + noun). The analysis is based on a theoretical perspective that supports the applied perspective and provides several criteria that must be considered when translating collocations. Using Google Translate (2021) as an example of an MT, this investigation clearly shows that the strategies applied by FAHQT as represented by Google Translate (2021) were not able to accurately translate collocations out of or in context. Google Translate was not able to adapt collocations in the target language to the experiences and beliefs of the target audience. Consequently, MTs like this require human Post-Editing using appropriate strategies such as communicative translation to effectively translate collocations and proofread .

Another important finding is that Google Translate (2021) was unable to use literal translation to translate metaphors correctly because this requires deep knowledge of the linguistic legacy of the TT language, considering the real preferences, ideology, and beliefs of Arab readers and their way of expressing feelings. Additionally, metaphors represent rhetorical art needs, imagination, and embodiment of literary values that differ greatly across languages. Google Translate was also incapable of properly translating idiomatic expressions, including proverbs and wisdom, from English into Arabic because these expressions involve the culture and background of the Arab nation.

One unanticipated finding was that MT failed to achieve the intended meaning of a collocations consisting of a verb plus a noun in context when translating from English into Arabic. Further, MT is

ineffectual for finding an appropriate equivalent collocation in Arabic as a target language. This study also suggests specific techniques and strategies that should be applied to Post-Editing Google Translate (2021) when translating idiomatic and metaphorical collocations.

The translations produced by Google Translate and Post-Editing were found to be like those produced by Google Translate without changing sentence types. Additionally, the number of syntactic elements and structures that made up the TT were similar in some respects but differed in the rhetorical effects and communicative functions, especially as most challenges occurred in sentences that were structurally complex. Therefore, the results, the paper defines radical strategies that should be applied to human Post-Editing when translating collocations from English into Arabic.

Last, further work is required to upgrade MT in general and Google Translate (2021) specifically. It is necessary to enrich and upgrade MT with a few bilingual English-Arabic dictionaries and collocations glossaries. It is also essential to create electronic bilingual glossaries for proverbs and upload these into MT software. The study calls for a more in-depth examination of the Google Translate English-Arabic translation output to identify translation problems. These problems should then be generalized and standardized among translators and algorithm specialists, thus developing a set of translation strategies to solve them.

The paper concludes by stating that Google Translate (2021) is unable to use the correct strategy to translate metaphors because this requires literary language analysis and deep knowledge of the linguistic legacy of the target language. Google Translate (2021) is also incapable of properly translating idiomatic expressions and grammatical collocations from English into Arabic because these expressions represent the culture, language, and background of the Arab nation.



## References

- Al-Busti, M. B. H. (2013). *Rāwdāt Āl-euqālā wā nuḥhāt Āl-fuḍālā*, Investigated by Mohammed Mohiyul Din. Dar Alkutub Alilimya.
- Al-Ghazali, M. (2005). *Īṭhy' Eūlūm Ālḍīyn wā māeāh Āl-māghnīū eān hāmāl Āl-āsfār fi Ālāsfār fi tākhrij mā fi āl'āyā' mīn Āl-ākhhbār līleālāmāt Zāyn Āl- ḍīyn Ābī Āl- fādl Āl-eīraqū*. Dar Ibn-Hazm.
- Al-Jaradi, M. (2015). *Translation of collocations: Problems and issues*. [Master's Thesis, Sana'a University].
- Al-Juathen, A. (2013). Zūbādāt ālkālām tātādih fi ālāikhtisār āldhy lāyūmlū wālā yūkhāl. *Al-Riyadh newspaper*. <http://www.alriyadh.com/850248>
- Al-Jurjani, Abdel-Qaher (1902), *dalayil al'iejaz*, Al-Khanji Library, Egypt, edited by Mahmoud Shaker.
- Almaany dictionary, <https://www.almaany.com/> Accessed on 20 November 2021.
- Al-Qasimi, A. (1979). Āltāeābir Ālāistilāhiāt wāl siyāqiāt wā muejām eārābiun lāhā. *An Arabic dictionary for them, Arab Organization for Education, Culture and Science*, 17(1).
- Allen, Jeffrey. 2003. post-editing. In Harold Somers (ed.), *Computers and translation: A translator's guide*, Amsterdam & Philadelphia: John Benjamins Translation Library.
- Al-Wahy, A. (2009). Idiomatic false friends in English and modern standard Arabic. *Babel*. 55(2), 101–123. <https://doi.org/10.1075/babel.55.2.01wahBabel>
- Al-Wazna, R. Y. (2014). Important translation strategies used in legal translation: Examples of Hooper's translation of the Ottoman Majalla into English. *The Ashgate handbook of legal translation*, 237–254.
- Al-Wazna, R. Y. (2018). Issues on the translation of certain English collocations into Arabic: From collocations to free constructions in the target language. *English Linguistics Research*, 7(3). <https://doi.org/10.5430/elr.v7n3p51>.
- Anani, M. (2000). *Fīn Āltārjāmā* (5th ed.). The Egyptian International Company.
- Ayyad, S. (1992). *Mādkhāl 'īlāā eīlm āl'ūslūb* (vol. 2). Giza Public Library.

- Baker, M. (1992). *In other words: A coursebook on translation*. Routledge.
- Barragán, A. M. (2017). Translation Arabic-English: The case of idioms. *Translation Journal*. <https://translationjournal.net/January-2017/translation-arabic-english-the-case-of-idioms.html>
- Burhoumi, Q. (2016). *Āltāwkiḍ fi ālqurān ālkārim nāmādhij mukhtārātā*. [Master's Thesis, University of Djilali Bounaama, Algeria.
- Cairns, B. (1988). Some problems for Machine Translation. *Lund University Dept. of Linguistics*, 33, 51–64.
- Chahboun, S., Vulchanov, V., Saldaña, D., Eshuis, H., & Vulchanova, M. (2016). Can you play with fire and not hurt yourself? A comparative study in figurative language comprehension between individuals with and without autism spectrum disorder. *PloS one*, 11(12), e0168571.
- Chia, R. (2003). From knowledge-creation to the perfecting of action: Tao, Basho and pure experience as the ultimate ground of knowing. *Human Relations*, 56(8), 953–981.
- Chomsky, N., & Lightfoot, D. W. (2002). *Syntactic structures* (2nd ed.). Walter de Gruyter.
- Collin dictionary, <https://www.collinsdictionary.com/dictionary/english> Accessed on 20 November 2021.
- Dajani, B. & Ali, M. (2015). *Ālmūshkilāt ālty tūājih āltālābāt ālunnātiqin biāllūghāt āl'iinjilziāt eind tāelām āl'afeāl ālmūrtābitāt biālzāmān wāljihāt fi āllūghāt āleārābāit*. *Journal of Studies and Humanities, University of Jordan*, 42, 503–516
- Dickins, J., Hervey, S., & Higgins, I. (2016). *Thinking Arabic translation: A course in translation method: Arabic to English*. Taylor & Francis.
- Fayed, W. (2011). Bed ṣur āltāebirāt ālā iṣtilāhiāt fi ālearābiāt ālmueāṣirāt. *The Arabic Language Academy Magazine*, 78. <http://www.arabacademy.gov.sy/uploads/magazine/mag78/mag78-4-3.pdf>
- Floor, S. J. (2007). Four bible translation types and some criteria to distinguish them. *Journal of Translation*, 3(2), 1–22.
- Futures Centre, (2021). <https://www.thefuturescentre.org/signal/googles-ai-creates-its-own-universal-language/>

- Towards translating popular proverbs, Twatian proverbs as a model.
- Guerberof, A. (2009). Productivity and Quality in MT Post-editing. In *MT Summit XII-Workshop: Beyond Translation Memories: New Tools for Translators MT*.
- Ghazala, H. (2002). Allegory in Arabic expressions of speech and silence (a stylistic-translational perspective). *Translation Journal*, 6(2). <http://accurapid.com/journal/20arabic>
- Ghazala, H. (2007). *Dar Al-illm's dictionary of collocations, comprehensive English Arabic dictionary of accuracy of word combination and usage*. Dar El Ilm Lil Malayin.
- Ghazala, H. (2008). Translation as problems and solution: A textbook for university students and trainer translators. Dar El-Ilm Lil-malaayiin.
- Ghanou, R., & Wasou, A. (2016). *Nāhw ṭarjāmāt Āl'āmthāl Ālshebyṭ, Āl'āmthāl Āl -tāwāṭiāt 'unmudhājān*. [Master's Thesis, University of Abu Baker].
- Google Translate, <https://translate.google.com.sa/?hl=ar> Accessed on 12 oct 2021.
- Google AI Blog, <https://ai.googleblog.com/> Accessed on 12 oct 2021.
- Granell, X. (2014). *Multilingual information management: Information, technology and translators*. Chandos Publishing.
- Hutchins, W. J., & Somers, H. L. (1992). *An introduction to Machine Translation* (vol. 362). Academic Press.
- Izza, L. (2010). Communicative and Semantic Translation. <https://lailatulizza.blogspot.co.id>
- Karjo, C. H., & Metta, E. (2019). The translation of lexical collocations in undergraduate students' theses: Students versus Google Translate. *Lingua Cultura*, 13(4). <https://doi.org/10.21512/lc.v13i4.6067>
- Khaki, F. (2014). The similarities and differences between idioms and wisdom saying. *Literature and Languages*. <https://www.diwanalarab.com/spip.php?article40685>
- King, M. K. (2019). Can Google Translate be taught to translate literature? A case for humanists to collaborate in the future of Machine Translation. *Translation Review*, 105(1), 76–92, DOI: 10.1080/07374836.2019.1673268.

- Maslooh, S. (1992). *Āl'ūslūb: Dīrāsāt līghāwīāt ' īihsāyīyā*. (3rd ed.). World of Books.
- Munday, J. (2016). *Introduction translation studies, theories and application* (4th ed.). Routledge, Taylor and Francis Group.
- Newmark, P. (1981). *Approaches to translation*. Pergamon Press.
- Newmark, P. (1988). *A textbook of translation* (vol. 66). Prentice Hall.
- Nofal, H. K. (2012). Collocationss in English and Arabic: A comparative study. *English Language and Literature Studies*, 2(3). <https://doi.org/10.5539/ells.v2n3p75>
- O'Brien, S. 2005. Methodologies for Measuring the Correlations between Post-Editing Effort and Machine Translatability. *Mach Translat* **19**.
- O'Brien, S. 2007. Eye-tracking and Translation Memory Matches. *Perspectives* Vol. 14.
- O'Brien, S. (2011). Towards predicting Post-Editing productivity. *Machine Translation* Vol **25**, 197.
- Ogden, C. K, & Richards, J. A (1946). *The meaning of meaning: A study of the influence of language upon thought and of the science of symbolism*. K. Paul, Trench, Trubner & Company, Limited.
- Ogden, C. K, & Richards, J. A (2016). *Māenāā āl-māenaāā dīrāsāt lī'ātharī āl-lūghāt fī āl- fikr Wā lī'ilm āl-rāmziā* (K.al Zubaidi, Trans.). Beirut, Dar Alkitab Aljadid Almutahida.
- Oxford learner dictionary, <https://www.oxfordlearnersdictionaries.com/> Accessed on 20 November 2021.
- Shojaei, A. (2012). Translation of idioms and fixed expressions: Strategies and difficulties. *Theory and Practice in Language Studies*, 2(6), 1220–1229.
- Sinclair, J., Sinclair, L., & Carter, R. (1991). *Corpus, concordance, collocations*. Oxford University Press.
- Spreeman, V. (2017). Lost (and found) in Translation: a Look at the Impact of Google Translate and Other Translation Technologies.
- Talebi, A. F. A. (2008). *Āshkāliāt Hūdūd altārjimāt al ālyt: tārjāmāt nizām " Şyštrān" lilmūt ālāzimat allāfazia ' enjlīziāt ' arabīa*. [Master's Thesis, University of Mentouri, Constantine Algeria].

---

TAUS. 2019. *TAUS Keynotes Asia 2019*  
<https://www.taus.net/academy/reports/event-reports/taus-keynotes-asia-2019> .

Nitzke J., & Hansen-Schirra.S. (2021) *A short guide to Post-Editing*(Translation and Multilingual Natural Language Processing 16). Berlin: Language Science Press.

Vieira, L. N., & Alonso. E. (2020). Translating perceptions and managing expectations: An analysis of management and production perspectives on Machine Translation. *Perspectives: Studies in Translation Theory and Practice, Perspectives*, 28(2), 163–184.  
<https://doi.org/10.1080/0907676X.2019.1646776> .

Wang, X., Wang, T., Muñoz Martín, R., & Jia, Y. (2021). Investigating usability in postediting neural Machine Translation: Evidence from translation trainees' self-perception and performance. *Across Languages and Cultures*, 22(1), 100-123.

Wu, Y., Schuster, M., Chen, Z., Le, Q. V., Norouzi, M., Macherey, W., ... & Dean, J. (2016). Google's neural Machine Translation system: Bridging the gap between human and Machine Translation.  
<https://arxiv.org/abs/1609.08144>