Terminology Translation Challenges and Strategies in Automotive Texts: A Qualitative Study of English-Arabic Translation

Hamad Abdullah H Aldawsari
Department of English, College of Arts and Sciences, Prince Sattam Bin AbdulAziz University,
Wadi ad-Dawasir, Saudi Arabia
h.alnawwar@psau.edu.sa

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Abstract:
Background: Terminology translation is a challenging task that requires specialized knowledge and skills. It involves transferring terms from one language to another while preserving their meaning and function.

Purpose: The purpose of this paper is to qualitatively expound upon terminology translation, focusing on an automotive context. Particularly, this paper examines the issue of terminology translation between English and Arabic for automotive texts.

Methodology: The paper uses a descriptive-analytical method to analyze a corpus of several automotive brochures. It identifies three terminology translation problems between the two languages and proposes some strategies to deal with each of them.

Findings: The paper finds that the three main problems are: terminology recognition, translation equivalence and term variations.

Originality: This paper is one of the few studies that delve into the specific issues of automotive terminology translation between English and Arabic, a relatively under-researched area in translation studies. By identifying key problems and proposing strategies to address them, it adds value to the existing body of knowledge and sets a foundation for future research in this area.

Research Implications: The study has implications for both translation practice and research. For practitioners, it provides strategies to overcome common challenges in automotive terminology translation between English and Arabic, which can enhance the quality of their work and contribute to the development of this specialized field. For researchers, it opens up new avenues for exploration in the field of terminology translation, particularly in the context of different languages and domains.

Keywords: terminology translation; descriptive translation studies; technical translation; automotive texts.

1 Introduction

In 1965, Rolls Royce was thinking of naming one of its cars the 'Silver Mist'. It then decided to change that name to the 'Silver Shadow' because it learned that 'Mist' is the German word for “manure” (Collinsdictionary.com, 2023). This incident illustrates how much consideration should be given before a decision is made regarding a product that is to be presented in various cultures. It also illustrates how much consideration should be given to the process of translation. Translation is a complex process that involves transferring terms from one language to another. It is often a challenging task due to the differences in language structure and culture. In the automotive industry, terminology translation is particularly important because it can affect the quality of products and services offered by companies. The automotive industry is a complex and rapidly evolving field that requires accurate and effective translation of technical terms. However, despite the importance of terminology translation in this industry, there is a lack of systematic and comprehensive research on this topic. This paper aims to address this gap by evaluating three issues faced when translating terminology in an automotive context: terminology recognition, equivalence and variation. The paper will also suggest some strategies to aid in dealing with each of these three issues. By doing so, this paper will emphasize the relevance of source language terminology and enhance the understanding of terms related to translation. The purpose for this research is to improve and optimize terminology translation in the automotive industry to ensure quality, consistency, and cultural adaptation of products and services. This paper hypothesizes that terminology translation can be improved and optimized in the automotive industry by using strategies such as terminology recognition, equivalence and variation.

2 Overview

The Merriam-Webster online dictionary defines a term as “a word or phrase that has an exact meaning” (Merriam-webster.com, 2023). A more elaborate definition of the word ‘terms’ is provided by Bowker (2011, p. 286), who refers to them as "discrete conceptual entities, properties, activities or relations that constitute
knowledge in a particular domain”. This means that, unlike words, terms have specific meanings closely related to the specialized field they are a part of. Understanding terms requires special knowledge of the field the terms are used in. Outside that field, a term may be understood as a word referring to something else. However, inside the specialized field, that word refers to something very specific and totally different. Consider the term ‘term’ itself. In law, a term can refer to a condition to be agreed upon in a contract. In education, a term is a fixed period of time. In language and in this paper, a term is a word with a specific meaning in a specific context. Thus, carefully understanding what a term means in a particular context is crucial. This is, naturally, even more crucial for translators.

Translating specialized texts is a common and challenging task for translators. They need to produce a target text that accurately and faithfully conveys the information and meaning of the source text. To achieve this, translators should pay close attention to any terminology found in the text, as terminology is the core of specialized communication. In this paper, three issues that translators encounter while dealing with terminology translation are discussed, based on the analysis of several automotive brochures. These issues are: terminology recognition, translation equivalence, and term variations. For each issue, some suggested strategies are presented to help translators overcome the difficulties and produce high-quality translations. The paper focuses on the brochure of the 2013 Lotus Elise (Lotuscars.com, 2013), a sports car that contains many technical terms that pose challenges for translators. The paper aims to highlight the importance and complexity of terminology translation, especially in the automotive domain, and to provide useful insights and guidance for translators and researchers.

3 Methodology

This research used a descriptive-analytical method to explore the translation of terminology in the automotive domain and the English-Arabic language pair. The data for this research consisted of a corpus of various automotive brochures, which were chosen based on their relevance to the research topic and their availability. The brochures included ones from BMW, Porsche, Toyota, and Lotus.

The data analysis was done in several steps. First, the brochures were read attentively and relevant terminology was identified and extracted. Terminology was defined as any word or expression that had a specific meaning and function in the automotive domain, such as car parts, technical systems, features, or specifications. Terminology was identified based on its definition, frequency, specificity, and position in the text. Then, the terms were analyzed to detect common translation problems between the two languages. Three main problems were identified: terminology recognition, translation equivalence, and term variations. To overcome these problems, the research suggested several strategies based on the data analysis and a literature review. These strategies were then applied to the data to show their effectiveness in overcoming the translation problems.

The research also used corpus tools such as Wordsmith and Antconc to do a keyword analysis to suggest strategies to deal with terminology problems. A keyword analysis is a method that compares the frequency of words in a specific corpus with their frequency in a general reference corpus, such as the British National Corpus (BNC). This method helps to identify words that are more characteristic or noticeable in a specific domain or genre than in general language use. These words can be considered as potential terms or candidates for translation.

The method applied in this research is suitable for a qualitative inquiry into the translation of terminology in the automotive field, especially between English and Arabic. Through a detailed examination of the data, this method provides useful insights into the challenges and solutions in translating terminology between these two languages.

4 Problems of Translating Terminology

Translators must typically deal with translating terms on an almost-daily basis. This is especially so when dealing with specialized texts. In specialized texts, translating terms can give rise to a number of issues, including the recognition of the terms, finding an equivalent and term variations (Sager, 1996). What follows is a brief overview of each issue.

4.1. Terminology Recognition

One of the greatest problems translators face when dealing with terminology is the actual recognition of terms. This may become a problem for various reasons. One of these is the varied perceptions of terms held by different people. What is considered a term by one person may be considered just a word by someone else, especially considering specialists and non-specialists. An example would be the word ‘apex’, which may appear as an automotive term but is typically not considered one by automotive specialists who regard it as just a word. On the other hand, the word ‘running’ is regarded as an automotive term by specialists in that it refers to a vehicle engine that is “operating or functioning” (Dictionary.com, 2023), even though it is generally conceived of as a general word by non-specialists. Moreover, any unit of meaning can be both a word and term, depending on the context. For
instance, the previous example, ‘running’, could be regarded as a term in an automotive context, or it could simply refer to the activity of running on foot.

Another reason for the problem of terminology recognition is the subjectivity of what is considered a term and what is not. Different people with different levels of knowledge and understanding will likely disagree on where to draw the line between the two. The verb ‘brake’, for instance, could be considered a special term related to vehicles stopping by some, while others might associate it with generally slowing down. These reasons illustrate the level of uncertainty involved in attempting to recognize terms. Also, translation will differ depending on how one views these words and terms. However, this is not the only issue involved in dealing with terminology.

4.2. Equivalence in Translation

Even if the issue of term recognition is overcome in one way or another, there is still the issue of translating terminology. More specifically, this issue relates to locating an equivalent for the term when translating from one language to another. Here, equivalence is discussed in a limited lexical sense with no theoretical implications (Sager, 1994; Baker, 2011). As Jakobson explains, “there is ordinarily no full equivalence between code-units” (1959/2000, p. 114), meaning that finding an exact equivalent for a word in another language is very difficult. It is probably more difficult to locate an exact equivalent when the two languages are very different, e.g., Arabic and English. Furthermore, the translator is dealing with terms and not normal words, which may increase the difficulty of translation. To overcome this problem, Jakobson suggests three procedures for translation: loan-translations, neologisms, and semantic shifts. Loan-translations are when words or phrases from the source language are borrowed and adapted into the target language. Neologisms are when new words or phrases are created in the target language to express new concepts. Semantic shifts are when existing words or phrases in the target language are used with different or extended meanings. These procedures can help translators find suitable equivalents for terms that do not have direct counterparts in the target language. However, they may also introduce some challenges and limitations, such as ambiguity, inconsistency, or loss of nuance. Therefore, translators need to be careful and creative when applying these procedures in their work. While examining the Lotus Elise brochure (Lotuscars.com, 2013), there were numerous instances in which this occurred. For example, the text included general automotive concepts, such as ‘wishbone suspension’ (p. 11), ‘torque’ (p. 21) and ‘downforce’ (p. 22), as well as more product-specific ones, such as ‘Valvematic System’ (p. 21), ‘Lotus Dynamic Performance Management’ (p. 24), and ‘Lotus Electronic Throttle Control system’ (p. 40). Locating an equivalent for both general and product-specific terms like these can prove challenging. Moreover, while briefly examining other online car brochures that were available in both English and Arabic (e.g., Chevrolet, Ferrari, Ford and GMC), it was observed that there are numerous shifts in meaning between parallel texts, perhaps signifying a struggle to locate exact equivalences between the two languages.

4.3. Term Variations

Sometimes, identical objects, events or ideas in a certain specialized field are given different terms by different authors or companies. In the automotive field, for example, identical concepts, mechanical parts and systems are given different names by different companies. For instance, the traction control system (TCS), which aids in the control of vehicles in the event that one or more of the wheels loses grip (Pistoia, 2009), is termed differently by different car companies. To illustrate, the German car company BMW identifies the system as Dynamic Stability Control (DSC) (Bmw.com, 2022), while another German car company, Porsche, calls it Porsche Stability Management (PSM) (Porsche.com, 2022). The Japanese car company Toyota calls it Vehicle Dynamics Integrated Management (VDIM) (Toyota-global.com, 2022). As a translator, it would be problematic to deal with all these different variations, especially considering the need to minimize target-reader confusion. In the above examples, abbreviations can also be identified as term variants, which can increase the difficulty of comprehension translation (Sager, 1994).

However, it can be argued that these term varieties are related to product-specific terms. A more established term variant would be a synonym of that term that is typically used in a certain contextual situation (Sager, 1996). Sager mentions examples of these that are taken from a study conducted by Hope (1984, cited in Sager, 1996), in which the author examined a maintenance manual in order to locate term variants. One of these is ‘gearbox end cover plate’, ‘end cover’ and ‘cover’, all of which relate to a similar vehicle part (p. 215). An example of such term variations found in the Lotus Elise brochure (Lotuscars.com, 2013) would be ‘[f]ully independent double wishbone suspension’ (p. 40), ‘double wishbone suspension’ (p. 11), and ‘suspension’ (p. 29). All of these terms essentially relate to the same thing with different degrees of specificity. Accurately translating each of these term variants is a somewhat challenging task.
5 Strategies for Terminology Translation

There are many proposed strategies for overcoming various issues related to terminology translation. For the three issues discussed above, there will be a number of corresponding suggestions presented under each given issue for ease of following.

5.1 Recognizing Terminology

The issue of terminology recognition can be overcome by paying attention to several clues in the text (Chung & Nation, 2003). One of these clues is the observation of Greek or Latin based words but with close attention that they do not appear anywhere else outside the technical area in question. For example, words such as aerodynamics, biturbo and dynaco can be identified as terms because they contain Greek and Latin prefixes and they are usually found in the automotive field. Another clue that can aid in identifying terms in a text is repetition. Words that appear and re-appear in a text may be special terms. Perhaps an automatic and objective way of searching for such words would be to run a keyword analysis on the text. This can be done using special corpus tools, such as Wordsmith or AntConc, in which the text is analyzed and compared to a reference corpus (Groom, 2010; Malamatidou, 2017). Doing so can help in identifying technical terms of that text if the reference corpus is a representative and general one and not of the same genre so that these repeated special terms appear in the keyword list. Running a keyword analysis on the Lotus brochure drew attention to terms such as Elise, Lotus, club, racer, wheel, track, etc., revealing that these terms were repeated to an unusual degree in the Lotus brochure. Of course, such a methodology is still limited and requires sorting because not all results were automotive terminology. There were also some normal words that were repeated to an unusual degree in the Elise text.

An additional clue in terminology recognition is paying attention when a writer stresses a term. This can occur when a writer includes a definition for that term, highlights that term using bold or italics or positions the term as a label in the text. Giving a definition to a term is, as Bramki and Williams (1984) explain, an attempt at lexical familiarization, which means that the author is aware of the status of the term and the fact that it requires some clarification. Ultimately, however, having in-depth knowledge of the specialized field one is dealing with is the most effective way to accurately identify terms. Also, consultation with specialists in the field whenever there is any confusion will be helpful.

5.2 Finding an Equivalent

As Baker asserts, equivalence is “influenced by a variety of linguistic and cultural factors and is therefore always relative” (2011, p. 5). Thus finding an exact terminological equivalent is very difficult if not impossible (Capellas-Espuny, 2004). Nevertheless, three types of equivalence will be highlighted here. These are ‘exact’ equivalence, partial equivalence and non-equivalence (Kashgary, 2011; Kenny, 2011; Sandrini, 1999). ‘Exact’ equivalence is achieved when a perfect counterpart in the target language is successfully identified. Most of the time, this is very difficult to achieve, especially if the source and target languages are tremendously different, such as Arabic and English (Abalkheel, 2023; Abdulraheem, 2022). If such a ‘perfect’ term equivalent cannot be achieved, the translator can aim at the next level by trying to locate a partial equivalent in the target language (TL). Partiality can mean many things, including a source language term (ST) that cannot be translated exactly but can be substituted with a broader or narrower TL unit. In the examined text, there were instances in which a decision was made to translate some terms using this strategy. For example, the two labels ‘Urban’ and ‘Extra Urban’ (Lotuscars.com, 2013, p. 42), which were used to describe slow city driving and fast highway driving (Demuro, 2022), were translated into Arabic using a partial equivalence approach by rendering ‘Urban’ as ‘لإليسه’ (literally city driving) and ‘Extra Urban’ as ‘إليسه خارج’ (literally outside-city driving). In this example, there was an attempt to achieve partial equivalence by providing slightly narrower TL terms for the ‘Urban’ and ‘Extra Urban’ labels by combining broader meanings with the simple notions of city driving and outside-city driving.

Non-equivalence occurs when there is no corresponding term in the TL. This happened numerous times during the process of translating the Lotus Elise brochure (Lotuscars.com, 2013). Several specific terms that were closely related to the automotive field had no corresponding terms in Arabic. These include ‘Valvematic’ (p. 21), ‘Touring’ (p. 39) and ‘diffuser’ (p. 40). Similarly, there were several product-specific terms that were closely related to the British Car company Lotus that also had no corresponding terms in Arabic. These include ‘club racer’ (p. 24), ‘comfort pack’ (p. 31) and ‘Servo-assisted’ (p. 40).

In order to solve the problem of non-equivalence, a translator attempts to choose from different strategies, including borrowing the term from the SL, the coining of a new term or, sometimes, omitting that term. In the case of the specialized automotive field, it has been observed from past experience that borrowing is, by far, the most common strategy. Thus, in the Elise brochure (Lotuscars.com, 2013), there was a tendency to borrow terms from the source text whenever an exact or partial equivalence could not be found. For example, ‘كفاءة’ (valvematic), ‘دربار’ (touring), ‘كلوب ريسر’ (club racer) and so on. Borrowings of this sort, although not agreeable to some and
encouraged only as a last resort, often quickly become popular with Arab readers, which is perhaps due to the current status of English as a global language. However, this is only based on personal observations.

5.3. Overcoming Variations

As a translator and not a specialist, having to deal with specialized terminology is sometimes a daunting task. However, this task becomes more daunting when a certain term varies. Term variation, therefore, sometimes poses a serious challenge. This challenge relates not only to the understanding of the variant but also to finding a matching variant for it in the target language (Sager, 1994). To overcome this challenge, two suggested steps are adapted from Sager (ibid). First, effectively identify the variants of the term in question in the SL, as well as the context for each situation in which it is used. Then, find matching variants of that term in the TL that correspond to each of these situations. An example that follows this methodology can be found in the examined Lotus Elise brochure. Three variants were identified in the source text: ‘[f]ully independent double wishbone suspension’ (p. 40), ‘double wishbone suspension’ (p. 11) and ‘suspension’ (p. 29) (Lotuscars.com, 2013). After reasonably understanding the context each variant is used in, an attempt was made to locate corresponding variants in the TL that would operate in similar contexts. It was determined that the first variant, ‘[f]ully independent double wishbone suspension’, was intended to be a detailed specification of the Elise’s suspension in a technical specification sheet. The second located variant, ‘double wishbone suspension’, was part of a two-page fairly detailed showcasing of the reason for the sport-quality performance of the Elise. The third variant, ‘suspension’, was only mentioned generally as part of a paragraph discussing the wheels and tires of the Lotus car. Having sensibly understood the contexts these three term variants were used in, an attempt was then made to reproduce corresponding variants in the TL. These were ‘التعليق المزدوج المستقل بالكامل’ (literally, the suspension of double wishbone) and ‘التعليق المزدوج’ (literally, the suspension). In these term variants, the context of the SL variants that they were translated from was carefully considered before any translation was produced. Building on that, the TL variants were chosen to correspond with the SL variants.

6 Discussion

The purpose of this study was to explore the translation of terminology in the automotive domain and the English-Arabic language pair. The study used a descriptive-analytical method to analyze a corpus of various automotive brochures and identify terminology translation problems and strategies to deal with them. The primary finding of this study is that automotive terminology translation encompasses three major challenges: terminology recognition, translation equivalence, and term variations. Additionally, the study found that dealing with term variations in different contexts is a significant aspect of the translation process.

This finding answers the research question of how terminology can be identified, analyzed, and translated in a specific domain and language pair. It also supports the literature review that terminology translation is influenced by a variety of linguistic and cultural factors and is therefore always relative (Baker, 2011; Capellas-Espin, 2004). The study also confirms some of the common terminology translation problems reported in previous studies, such as translation equivalence (Kashgary, 2011; Kenny, 2011; Sandrini, 1999) and term variations (Sager, 1994).

Terminology recognition emerged as a significant challenge. This underscores the importance of understanding the source language terminology and the need for translators to have specialized knowledge in the automotive domain. The study suggests that translators should consult reliable sources and use consistent terms in their translations to overcome this challenge.

Translation equivalence was another problem identified in this study. This problem arises when there is no adequate rendering of a term in the target language. The strategies proposed in this study can help translators find suitable equivalents in the target language.

Term variations posed another challenge. Different automotive companies often use different terms to refer to a similar part or technical system. This can lead to inconsistencies in translations. The study suggests that translators should be aware of these variations and strive for consistency in their translations.

7 Conclusions

This paper discussed the issue of terminology translation, focusing on the automotive domain and the English-Arabic language pair. It provided a brief overview of the issue and its importance, highlighting the challenges and strategies involved in transferring terms from one language to another. It identified three terminology translation problems that translators encounter while dealing with automotive texts: terminology recognition, translation equivalence, and term variations. It proposed some strategies to deal with each of these problems, such as consulting reliable sources, using consistent terms, selecting adequate renderings, and adapting terms to the target culture. It analyzed a corpus of several automotive brochures, focusing on the brochure of the 2013 Lotus Elise, a sports car that contains many technical terms that pose difficulties for translators. The aim of this paper was to
highlight the importance of understanding source language terminology, as well as the interrelationship between terminology and translation. The paper contributed to the literature on terminology translation and provided insights and guidance for translators and researchers. The paper also suggested some directions for future research, such as conducting more empirical studies on terminology translation in different domains and languages, exploring the role of technology and tools in terminology translation, and examining the impact of terminology translation on the quality and usability of translations.

7.1 Recommendations, implications and limitations

Based on the findings of this paper, some recommendations can be drawn for terminology translation in the automotive domain. The paper recommends that translators should pay close attention when translating technical terminology and consult reliable sources of terminology, such as specialized dictionaries, websites, or experts, to ensure accuracy and consistency of terms. Moreover, translators should use consistent terms throughout the translation, avoiding unnecessary variations or synonyms that may confuse the readers or affect the coherence of the text. Furthermore, translators should select adequate translations for terms that match the style and purpose of the text, as well as the expectations and needs of the target audience. Finally, translators should adapt terms to the target culture and language, taking into account linguistic and cultural factors that may influence the acceptance and comprehension of terms.

This paper has implications for terminology translation in both practical and theoretical aspects. It offers a broad analysis of the challenges and solutions for terminology translation in the automotive domain and the English-Arabic language pair, which can benefit translators and researchers in enhancing the quality and usability of their translations. Moreover, it adds to the literature on terminology translation by introducing a classification scheme for terminology translation problems and strategies based on linguistic, cultural and technical factors. It also shows the complexity of terminology translation as a process that demands a deep understanding of both source and target languages and cultures, as well as the interrelationship between terminology and translation.

However, the paper also has some limitations that may affect the generalizability of its findings. First, the paper focuses on one domain (automotive) and one language pair (English-Arabic), which may not be representative of other domains or languages. Second, the paper relies on a small sample of texts, which may not capture the full range and diversity of terminology translation. Third, the paper adopts a qualitative approach to terminology translation analysis, which may not account for quantitative aspects of terminology translation.

Therefore, the paper suggests some directions for future research that could build on its findings and address its limitations. Future research could explore terminology translation in other domains and languages to compare and contrast different types of terms. Future research could also use larger and more varied samples of texts and terms to increase the validity and reliability of terminology translation analysis. Future research could also employ mixed methods or triangulation to combine qualitative and quantitative data and techniques to enrich terminology translation analysis.

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