Investigating The Most Utilized Strategies in Translating Medical Terminologies in AV Shows

By

Asal Ismaeel Mehdi

University of Mustansiriyah/ College of Arts/ Department of Translation/Iraq
Email: asalismaeel97@gmail.com

Hala Ghanim Mohammed

University of Mustansiriyah/ College of Arts/ Department of Translation/Iraq
Email: h.mohammed@uomustansiriyah.edu.iq

Abstract

The current research is dedicated to identifying the most utilized strategies in translating English medical terminologies into Arabic and exploring their frequencies of occurrence. The corpus-based research includes an English-Arabic parallel corpus and encompasses English audiovisual (AV) materials from the medical genre with their Arabic subtitles. The unit of analysis is the English medical terminologies and their Arabic translated versions extracted from the subtitles. The theoretical framework took its basis on Gottlieb's (1992) ten subtitling strategies. The results revealed that not all the strategies proposed by Gottlieb (1992) were utilized in the corpus: transcription, condensation, decimation, and resignation. The results further revealed that the transfer strategy was the most utilized, followed by the paraphrase strategy, the deletion strategy, the expansion strategy, and the imitation strategy. Finally, it is concluded from the results that the nature of the medical genre in the AV materials had a significant influence in terms of the most utilized strategy since medical terminologies are considered specialized in nature; they require a strategy that renders the medical terminologies in the most precise manner possible.

Keywords: Subtitling, Strategies, Medical Terminologies, Audiovisual (AV), Gottlieb.

1.   Introduction

For many years, the phenomenon of translation has always played a major part in communication. The field of Translation Studies (TS) has been consistently developing over the past few decades, where audiovisual translation (AVT) has rapidly materialized as a modern domain (Kuhiwczak & Littau, 2007). The most common mode of AVT is subtitling, which comes in the form of visual texts appearing on the screen's lower half (Riess, 1971). The mode of subtitling witnessed crucial growth and was constantly updated. This mode is described as very quick, economical, and easy to implement (Díaz-Cintas, 2004).

Furthermore, AVT is considered a modern prospering domain within the field of translation studies. Gambier (2013) states that "AVT has become more familiar and more frequently discussed in translation studies since the 100th anniversary of cinema (1995), which also coincided with the booming of the so-called new technology" (p. 45). With that being stated, AVT has two reception modes: visual media and aural media (Wang, 2020). AVT is concerned with all types of films, movies, video clips, television shows of all sorts, computer games, video games, etc. AVT is also known as *Multimedia translation* and *Screen translation* because it covers all the areas with multimodality and includes all shows and programs broadcasted on television or distributed via screen. Luyken et al. (1991) state that AVT is the

process that allows the target audience to understand and comprehend films or TV programs in the SL.

The current study was conducted to investigate the most utilized strategies in translating medical terminologies from English to Arabic in the AV setting. Many studies were conducted to investigate the utilized strategies for translating cultural expressions or idioms in the AV settings of the dramatic or comic genre. However, due to the shortage of the medical genre in AVT research, and the limitation of studying strategies and translation issues for translating medical terminologies in specifically, thus, the current study investigates this issue.

2.   Audiovisual Translation

Despite being a relative newcomer within the area of TS, AVT has advanced from the discipline's periphery to its core during the past two decades (Chaume, 2004). It is regarded a method distinguished by the interlingual or intralingual transfer of AV texts. As the name implies, AV scripts include the translatable information through two communication channels that render coded messages using different sign systems. The first channel is the visual channel, through which light waves are transmitted and received as pictures, movement, and colors. The second channel is the acoustic channel, through which acoustic vibrations are transmitted and received as paralinguistic information, words, special effects and soundtracks (ibid).

Gambier (2003) explains that the purpose of using the term *audiovisual* is to emphasize the multi-semiotic dimension of all aired shows. Luyken et al. (1991) state that AVT is the process that allows the target audience to understand and comprehend films or TV programs in the SL. Mohammed (2020) states that many issues should be taken by a translator in AV settings as each AV mode has characteristic. At the same time, Ako (2013) defines AVT as an inter-semiotic translation which works on either interlingual or intralingual levels. It is described as translation of all AV materials.

Díaz Cintas, Danan, and Caimi are among many scholars who advocate the significance of AVT in the educational sphere and especially in second language learning. According to Giri (2018), AVT is also involved for educational purposes (Learning via Subtitles), a project funded by the European Commission and is used to develop educational materials to learn foreign languages actively. Many countries provide Post Graduate courses in AVT, like Spain and England. Nowadays, most symposia and conferences are organized and held based on AVT.

Modes of AVT are distinguished by linguists such as Chaume (2013), Perego (2005) and Gambier (2004). According to them, modes of AVT can be classified into subtitling, dubbing, voice-over, surtitling, free commentary, partial dubbing, narration, audio description, live subtitling, interpreting, subtitling for the deaf and hard of hearing (SDH). The most common and utilized mode of all is subtitling (Riess, 1971).

3.   Subtitles

Karamitroglou (2000) describes subtitling as the translation of the spoken or written ST of an AV material into a written TT that is typically placed over the visuals of the original AV material located at the lower half of the screen. Hurt and Widler (1998) define subtitling as a dialogue translation presentation in a movie that takes the shape of subtitles that normally appear at the lower half of the screen. Subtitles appear and disappear according to the original

part of the dialogue; these subtitles are often added at a later stage following the production stage. Petillo (2008) deems this mode one of the most familiar modes of AVT.

According to Díaz Cintas (2009), subtitles are affected by three factors, which are correspondence between sound, text and image. Firstly, it is crucial for the transmitted translated message to synchronize with the source text dialogue; subtitles should not collide with the character's actions on the screen. Secondly, changing the dialogue from spoken to written can often cause the translator to delete lexical units in the translation process. Thirdly, the subtitle text should match the screen's width since the screen's actual size is limited, considering the ability to read the subtitle text clearly.

According to Reiss (1971), it is essential to notice that the lower part of the screen can fit two lines only. Therefore, the subtitle must not exceed thirty-five signs. Therefore, the volume of one text replica is limited by 70 signs. It is considered a small number due to the size of the screen since the subtitles should not convey more than 20% of the screen. Therefore, subtitles should render visual information as little as possible. Reiss sums this matter from a grammatical perspective by stating that each title and each line are supposed to produce a meaningful unit. As for timing, it is a maximum period of six seconds; a perfect title appears at the beginning of the speech and disappears by its end. This period is considered reasonably enough for an average individual to read the subtitle of two lines, which equals approximately 70 signs (ibid).

4.   Characteristics of Subtitles

Neves (2009) argues that space and time are considered constraints restricting subtitles; he describes language as a hostage to specific parameters. According to Karamitroglou (1998), these parameters limit the choices and options for the subtitle expert, which are related to time, such as the duration of the subtitles, and related to space such as the number of lines, position on the screen, number of characters, etc. Furthermore, several other factors govern subtitles, such as punctuation, font colour and background.

Chiaro (2009) states that AVT is characterized mainly by loss. However, this loss is considered a logical consequence due to space and time constraints. Loss in subtitles is considered acceptable since this loss is deemed as a reduction. In other words, transitioning from the spoken form of language to the written form can only be done by minimizing the dialogue. Chiaro (2009) states that subtitles are characterized mainly by loss. However, this loss is considered a logical consequence due to space and time constraints. Loss in subtitles is considered acceptable since this loss is deemed a reduction. In other words, transitioning from the spoken form of language to the written form can only be done by minimizing the dialogue. Chiaro (2009) further explains that it is acceptable to simplify and eliminate the disposable elements of the dialogue only if these elements would not cause harm to the original meaning of the dialogue. Chairo estimates the reduction from 40% to 75%, this reduction is of great benefit to the audience to give them the time to enjoy the show and watch it effortlessly without losing track of the scenes.

It is essential for the viewers to feel comfortable while reading the subtitles without realizing that they are making an effort to follow the subtitles at the bottom of the screen. Since the audience are very important, their perception and processing of the subtitles must be taken into consideration. Schwarz (2003) states that the critical issue in subtitling arises from the disperse nature between the reading speed and the spoken language's speed; reduction is required in this case.

5.   Subtitling Strategies

The term strategy has two meanings in TS: limited and broad. Several linguists associate strategy as a concept with the notion of problem. As a result, strategies in translation are defined as techniques and procedures for resolving a specific translation problem found in the source material (Krings, 1986). There are several researchers and scholars who investigate strategies in TS, such as Krings (1986), Kiraly (1995), Hönig (1995), and Schaeffer and Carl (2013). Lörscher (1996) describes translation strategies as "procedures which the subjects employ in order to solve translation problems" (p. 27). Gottlieb, an experienced AV translator, developed a number of primary classifications of subtitling strategies. There are many motives and reasons behind including Gottlieb's (1992) AVT strategies, specifically in the second part of the model. Henrick Gottlieb is the pioneer and leading name in AVT, and he is most known for his work and experience in AVT. Gottlieb (1992) proposes ten holistic AVT strategies "expansion, paraphrase, transfer, imitation, transcription, dislocation, condensation, decimation, deletion, and resignation" (p. 166). These strategies cover every aspect of AVT, which makes them widely adopted in most AVT research and studies by many researchers around the globe.

When Gottlieb's (1992) AVT strategies are compared with other scholars' strategies, such as Antonini's (2005), it is found that Gottlieb's ten strategies are holistic and cover all aspects of AVT in comparison with Anotnini's who has only three strategies, namely, elimination, rendering, and condensation. Therefore, Gottlieb's (1992) AVT strategies are considered the optimum framework for the current research. Although Gottlieb did not provide a comprehensive description of each of these strategies, other researchers who cited him have. He presents ten strategies (Gottlieb, 1992, p. 166).
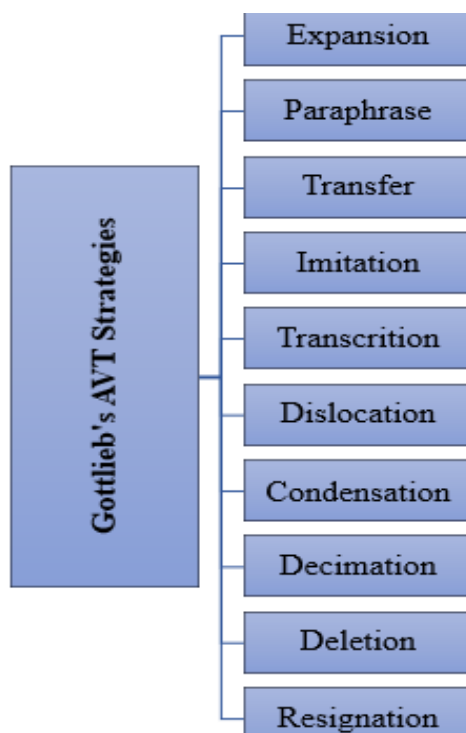

Figure 1
Gottlieb's (1992) AVT Strategies

4.1 Expansion Strategy

According to Gottlieb (1992), expansion is a common strategy used in several cases

where the SL needs an explanation. Consider the following example:

ST: You have to use the *thermometer*

TT: يجب ان تستخدم *الثرموميتر – ميزان الحرارة*

In this example, the word *thermometer* is translated as الثرموميتر – ميزان الحرارة. The translator/ subtitler, in such case, is obligated to use the expansion strategy to clarify and explain the meaning of the thermometer. Here, expansion is the consequence of the subtitler's decision to explain and clarify the medical terminology.

4.2 Paraphrase Strategy

Paraphrase is a strategy resorted to by the translator in case the phraseology in the ST is not appropriately reconstructed in an exact manner in the TT (Gottlieb, 1992). See the example below:

ST: You saved his life! *God bless your heart*.

TT: لقد انقذت حياته! *بارك الله بك*.

As far as the semantic level is concerned, the English expression *God bless your heart* has been paraphrased into ST بارك الله بك since it sounds much more natural and acceptable to the Arabic viewer than the literal translation would do.

4.3 Transfer Strategy

Transfer is the process of rendering the ST accurately and completely (Gottlieb, 1992). For example:

ST: There are two kinds of surgeries.

TT: هناك نوعان من العمليات.

This example shows that the translation is done accurately and entirely without any omission, addition, or change in meaning. It is stated by (2015: 61-70) "interpreters tend to use the full omission strategy, especially with culture-specific fixed expressions".

4.4   Imitation Strategy

Gottlieb (1992) explains that imitation is the strategy of maintaining the same form of the ST, specifically with proper names of characters and places. Consider the following example:

ST: He has *Parkinson's* disease

TT: يعاني من داء *باركنسون*

In this example, *Parkinson* is a proper name that is translated using the imitation strategy.

4.5 Transcription Strategy

Transcription is a strategy employed in some instances if the ST includes unusual or unclear terms. This case can be represented when a third language or nonsense language is involved in the dialogue of the ST (Gottlieb, 1992). The example below clarifies this strategy:

ST: You will heal soon, *amour*.

TT: سوف تشفى قريباً يا *عزيزي*

The word *amour* in the SL is rendered as عزيزي in the TL. The word amour itself is from a third language which is French, and the meaning is *love* or *dear*.

4.6 Dislocation Strategy

According to Gottlieb (1992), dislocation is a strategy applied when the source material of the AV has some types of special effects such as songs and poems in a musical film. In such cases, translating such effects is prioritized and the content is usually neglected. The below example, a verse from The Garden of Proserpine, a poem by Algernon Charles Swinburne translated by Khulusi, illustrates this strategy:

ST: "that dead men rise up never, That even the weariest river, Winds somewhere safe to sea" (Swinburne, 1866, p. 3).

TT: " و بان اصحاب القبور على المدى، لا يبعثون الى الحياة بحال. مهما استطال فكل نهر متعب، يوماً له في البحر خير مال" (Khulusi, 1982, p. 31).

4.7 Condensation Strategy

Condensation is the process used to eliminate the information of the ST without losing the core of the message represented by the meaningful content (Gottlieb, 1992). In this regard, Zhang (2009) mentions that "an over-lengthy dialogue may necessitate condensation by the translator to get rid of any redundant information" (p. 113). Consider the following example:

ST: "The seating chart for the inauguration. How do these two works for you and Claire? Wow. They come with a complimentary set of tickets to the Jefferson Ball" (House of Cards, S. 1, ep. 1 Part 5)

TT: تخطيط الجلوس في حفل الافتتاح. هل انت وكلير بخير؟ تذاكر مجانية إلى جيفرسون بول

In this particular example, the translator condenses three lengthy sentences into three more concise parts, one of which is a question, and the other two are statements. A sort of interrogation was maintained in TT, although the expression *wow* is deleted. The translator decides to use two other strategies in addition to implied simplification to reduce the amount of content in the TT: omission and imitation. This is done under the assumption that the original form of the ST in TT would be preserved by keeping *Jefferson Ball* as a proper name in the ST. Michael (2012) states that "in the practice of subtitling, strategies may be applied separately, but they often occur in combination with one another. When translating more extended dialogues, it is often impossible to apply a single strategy to produce meaningful content in TL" (p. 117).

4.8 Decimation Strategy

Decimation is considered an extended strategy or an extreme form of the condensation strategy. It is best represented by eliminating critical elements due to several reasons such as discourse speed (Gottlieb, 1992). The example below shows the use of this strategy:

ST: He's not yet sedated. Take him to the OR immediately! *And prepare two milligrams of parenteral hydromorphone.*
TT! لم يتم تخديره حتى الان، خذه إلى غرفة العمليات على الفور

In this strategy, the second part of the discourse is completely deleted. Two constraints enable the translator to delete essential elements that truly carry actual meaning: the standard length of subtitles represented by two lines and discourse speed.

4.9 Deletion Strategy

According to Gottlieb (1992), deletion is the strategy that refers to deleting some elements of the ST. Michael (2012) explains this strategy as an "exclusion of part of the whole SL message, especially less important aspects, such as those having verbal content, leaving the

most important content to be expressed intact" (p. 117). This strategy permits the omission of several elements of the ST such as words, phrases, or whole sentences and generating a TT, normally missing some parts. The examples below clarify this strategy:

ST: He died of a number of *cardiovascular diseases.*

TT: لقد مات بسبب عدد من امراض القلب

In this example, part of the terminology *vascular*, which is الاوعية الدموية, is deleted since it is less important and insignificant to the message. Further examples can be assimilated by the occurrence of repetitions in the ST and the case of deleting them in the TT. This strategy includes the elimination of the repeated expressions in the source sentence. Such expressions can be deemed unneeded or insignificant. Consider the word *because* in the following example:

ST: Is it *because* they don't want to operate the surgery, or *because* they don't know how?

TT: لا يريدون اجراء العملية ام لا يعرفون كيفية اجراءها؟

The word *because* is removed from the TL version of the above example because it is considered to be unnecessary; it does not contribute any new information or meaning to the sentence, but rather serves the function of an *empty filler*. These kinds of linguistic expressions neither enhance nor alter the essence of the produced subtitle; in contrast, they perfect the whole idea of the subtitle's meaning to be later on put onto the bottom of the screen. This is without a doubt the most significant benefit of using such a strategy, along with the fact that such a strategy is simple.

4.10 Resignation Strategy

Resignation is a common strategy adopted as a solution when no viable translation is discovered, thus, the meaning will eventually be lost and deleted (Gottlieb, 1992). The following example illustrates this case:

ST: *Now, look…* We have to make two incisions to insert the surgical tubes.

TT: يجب عمل شقين لإدخال الأنابيب الجراحية.

In the example above, the ST phrase *Now, look* is deleted from the TT product. The use of this strategy can be justified since, during the act of watching an AV material; it can be noticed that the real meaning of such a phrase and its actual purpose, is clearly shown by the body movements or facial expressions of the actors. Therefore, the Arabic phrase translated as الآن انظر would be just an *empty filler*.

Methodology

The current research is a corpus-based analysis of the AVT strategies conducted on the English-Arabic parallel corpus of medical terminologies. The corpus originally comprises 100 English medical terminologies extracted from the AV materials' dialogue and their 100 Arabic translations retrieved from the subtitles (200 medical terminologies altogether). However, after thoroughly examining the translation of each terminology, it appears that 8 terminologies were translated imprecisely. Therefore, they were excluded from the corpus leaving only 92 terminologies qualified to the analysis.

The corpus is constructed of two parts, the first part is the English audio scripts of five English medical materials, and the second part is the Arabic visual translation in the form of subtitles. All these materials are of the medical genre to focus on the medical topic and content

and explore the most utilized strategy for this genre.

The terminologies are taken from the highest rating episode of five of the highest-rated medical shows. The medical shows were chosen from The Internet Movie Database (IMDb)[1] The online database includes statistics and information about TV shows, programs, and movies. It is considered the world's most authoritative source for AV materials (Borner, 2007). The platform chosen to collect data is Netflix, which is considered the most popular video streaming platform around the globe (Wayne, 2019). The reason for choosing this platform is that its policy requires professional translators and subtitling experts holding Hermes[2] certificate to provide the audience with the best experience possible (Netflix TechBlog, 2017).

Table 1. *Data Resources*

AV Material	Platform	Show's Rate	Season-Episode	Episode's Rate	Number of terminologies
The Good Doctor	Netflix	8.1/10	S2-E10	9/10	51
The Resident	Netflix	7.8/10	S2-E20	9.2/10	17
Grey's Anatomy	Netflix	7.6/10	S2-E16	9.4/10	8
New Amsterdam	Netflix	8/10	S1-E16	8.3/10	10
Code Black	Netflix	8/10	S2-E16	9.4/10	8
		Total			100

The table above includes the medical the AV shows' names in the first column, and the second column includes the name of the producing and publishing platform, namely, Netflix. The third column consists of each show's rating according to the platform; the rate starts from 0 to 10, while the fourth column specifics the number of each season and episode from which the terminologies were extracted. The fifth column consists of each episode's rating; the rate begins from 0 and escalates up to 10. The last column illustrates the number of terminologies extracted from each episode. In order to collect the data for analysis, the researcher adopted three stages process; carefully watching and observing the episodes of the AV materials, gathering the English medical terminologies and their Arabic translation of each episode, and finally, figuring the strategies utilized in subtitling based on the framework as mentioned earlier. As mentioned earlier, the unit of analysis is the English medical terminologies and their Arabic translation.

Analysis

This section introduces the analysis of the utilized strategies in translating medical terminologies. A total of 94 terminologies were analyzed to investigate the utilized strategies. However, due to the word limits only 3 examples will be drawn.

5.1   *Marrow Donation*

Table 2. *Details and Results of (Marrow Donation)*

Show	Season-Episode	Timing
The Good Doctor	S2-Ep10	00:06:29
ST	It looks like your dad is good to go with the *marrow donation*	
TT	يبدو انه يمكن لأبيك المضي في *التبرع بالنخاع*	
Dictionary Meaning	التبرع بالخلايا الجذعية للنخاع العظمي او الشوكي والدم	
Strategy	Deletion	

---

[1] Highest-rated medical shows according to IMBd: https://imdb.to/3bqKjk
[2] Hermes is the first online subtitling and translation test and indexing system by a major content creator. It is a 90-minute translator test used by Netflix fulfillment partners to qualify freelancers for subtitling jobs with the world's leading internet entertainment service.

When it comes to investigating the utilized strategy, it is found that the translator/ subtitler adopted the deletion strategy proposed by Gottlieb (1992) to omit or reduce parts of the medical terminology. This strategy causes loss in translation. However, this loss is considered reasonable due to space constraints in AVT in general and subtitling in particular. Loss in translation is considered acceptable because it is deemed as a reduction. Chairo (2009) estimates the reduction for subtitles from 40% to 75%, which is of great benefit to the audience to give them the time to enjoy the show. Transitioning from the spoken form of language to the written form can only be done by minimizing the dialogue (Chairo, 2009).

5.2   *Catheter*

Table 3 *Details and Results of (Catheter)*

Show	Season-Episode	Timing
The Resident	S2-Ep20	00:27:55
ST	That much blood in a *catheter* is not normal	
TT	هذه الكمية من الدماء فى كيس القتطرة ليست طبيعية	
Dictionary Meaning	قَتْطارُ also pronounced قِسطارُ	
Strategy	Expansion	

Concerning AVT strategies, in this specific case, the translator/ subtitler dealt with a very specialized medical terminology. This terminology might not be familiar to a large number of readers/ audiences, and the device is constructed of several parts, mainly the collection bag to be filled. Therefore, the translator/ subtitler adopted the expansion strategy proposed by Gottlieb (1992) to clarify to the readers/ audience the functionality and purpose of the device. The translator described the obvious part to the sight: the collection bag. Therefore, he/ she explained it using the expansion strategy and added the word كيس

5.3   *L5-S1 (Lumbar Vertebrae 5 to Sacral Vertebrae 1) (lumbosacral joint)*

Table 4 *Details and Results of (L5-S1)*

Show	Season-Episode	Timing
The Resident	S2-Ep20	00:17:94
ST	No, it's here! The *L5-S1*	
TT	كلا انها هنا عند مفصل القطنية العجزية	
Dictionary Meaning	مفصل القطنية العجزية	
Strategy	Transfer	

In this case, the translator/ subtitler chose the transfer strategy proposed by Gottlieb (1992). According to Gottlieb (1992), this strategy helps rendering the terminology from the ST to the TT accurately and completely without any change or reduction.

6.   Results and Discussion

After the data analysis, the results reveal that the translator/ subtitler of the episodes under discussion has utilized several strategies to render the English medical terminologies into Arabic. The strategies are as the following.

Table 5 *Results of the Data*

AVT Strategy	Frequency	Percentage
Transfer	64	70%
Paraphrase	12	13%
Expansion	6	6%
Imitation	1	1%
Deletion	9	10%
Dislocation	0	0%
Transcription	0	0%
Condensation	0	0%
Decimation	0	0%
Resignation	0	0%
Total	92	100%

From the results stated above, it can be noticed that the transfer strategy achieved the highest frequencies of occurrence and the highest percentage of 70%. This strategy, by definition, leads to the most accurate and complete translations (Gottlieb, 1992). Therefore, it creates a strong link between the precise translations and the transfer strategy since this strategy was employed on 64 translations. It appears that this strategy was the most adopted because it works best with achieving precise and complete translation of the medical terminologies since most of them have a certain meaning that must be conveyed in the most precise manner. This strategy seems suitable and utilized for most medical terminologies, such as disease names.

On the other hand, the paraphrase strategy ranked second by forming 13%. This strategy is used to reconstruct the forms of some terminologies, such as *low-grade fever* that was translated as حمى منخفضة الدرجة instead of حمى بسيطة, *soft quarantine* that was translated as حجر صحي مخفف instead of حجر صحي غير رسمي, and *DNR* that was translated as توصية عدم محاولة الأَمُر بِعَدَمِ الإِنعَاش instead of عدم الاحياء. This strategy was utilized by the translator/ subtitler 17 times. This strategy is utilized when the medical terminology needs to be paraphrased to fit the structure of the target language.

The strategy that occupied the third stage by 10% is the deletion strategy. Since the setting is AV, several medical terminologies were subject to reduction and omission in their translated versions. Accordingly, loss in existing parts of meanings, although a logical consequence and considered acceptable in AV settings (Chairo, 2009), certainly decreases the quality of the translation. The deletion strategy was utilized on 6 terminologies. This strategy was adopted in translating the medical abbreviation *CPR* as انعاش القلب instead of انعاش القلب والرئتين, the word الرئتين was obviously deleted, and the terminology *compression* as الضغط instead of الضغط الانعاشي, the word الانعاشي was certainly omitted.

The expansion strategy, on the other hand, took the fourth and penultimate stage. This strategy is commonly employed to clarify vague terminologies by adding explaining words to the original to boost the meaning or expand it to a broader dimension. This strategy is best represented in the translation of the medical drug *Pepto* which was translated as علاج الحموضة instead of its actual chemical compound name بيتو بزمول. The translation expanded in meaning to explain that Pepto is a drug that treats stomach acidity. Another incident where this strategy was adopted is the translation of the medical machine name *Neptune machine* as جهاز ماص instead of جهاز نبتون. This translation expanded the meaning to clarify that the Neptune machine is used for suctioning the free fluids or blood from the abdominal cavities. This strategy was utilized for translating 8 terminologies. This strategy is used when the medical terminology needs further clarification, especially if the medical terminology describes a medical process or condition.

The last employed strategy that ranked the fifth stage by 1% and achieved the lowest occurrence frequency is the imitation strategy. This strategy is known to be utilized with the proper names by maintaining the same form as the original. This strategy was only adopted once in the current research, where it occurred in the translation of *insulin* as انسولين.

Furthermore, the other five AVT strategies, namely, the dislocation strategy, the transcription strategy, the condensation strategy, the decimation strategy, and the resignation strategy, were not utilized for several reasons.

Firstly, the dislocation strategy is commonly adopted in AV materials of the musical genre (Gottlieb, 1992). Therefore, this strategy was not utilized since the AV materials in this research are of the medical genre, which does not include any special effects or music.

Secondly, the transcription strategy is normally utilized in dealing with a third language or nonsense languages (Gottlieb, 1992). Since no third language is used other than English or Arabic in this study, and not a nonsense language is detected in the AV materials of the current study, this strategy was not employed.

Thirdly, the condensation strategy and the decimation strategy were not adopted by the translator/ subtitler because these two strategies use an extreme form of deletion that occurs on the text level frequently to delete sentences and chunks of speeches (Gottlieb, 1992). Since the research deals with the word level, these two strategies cannot be applied to terminologies. The strategy used to delete parts of terminologies is called the deletion strategy.

Lastly, the resignation strategy was not utilized because it mainly deletes empty fillers (Gottlieb, 1992). Medical terminologies as the data of the current study have no empty fillers; therefore, the translator/ subtitler did not adopt this strategy.

It is important to compare the AVT strategies' findings of the current study with the findings of other studies to observe the similarities and differences between the two. Ben Slamia (2020) presented a study that investigated the employment of Gottlieb's (1992) AVT strategies on the translation of English taboo words into Arabic, and since the current research deals with the translation of medical terminologies into Arabic, both studies are compared. The results of Ben Slamia's (2020) research revealed that only four out of the ten strategies were utilized: 48% transfer, 24% dislocation, 17% resignation, and 11% deletion. The common results between the current study and Ben Slamia's (2020) study are that the transfer strategy in both studies ranked first since this strategy is commonly used by the translators/ subtitlers to render complete meanings. Furthermore, the deletion strategy was not utilized to delete parts of the taboo words and expressions, it was utilized to omit the taboo words completely and leave them unsubtitled (Ben Slamia, 2020). In the case of the current study, the deletion strategy was utilized to delete parts of the medical terminologies and not to delete them completely. Table 3 below illustrates the comparison between the two studies.

Table 6 *Comparison Between the Results of the Current Study and Ben Slamia's (2020) Study*

Strategy	Current Study's Results		Ben Slamia's (2020) study's results	
	Frequency	Percentage	Frequency	Percentage
Transfer	64	70%	103	48%
Paraphrase	12	13%	0	0%
Expansion	6	6%	0	0%
Imitation	1	1%	0	0%
Deletion	9	10%	23	11%
Dislocation	0	0%	52	24%
Transcription	0	0%	0	0%
Condensation	0	0%	0	0%
Decimation	0	0%	0	0%
Resignation	0	0%	36	17%
Total	92	100%	214	100%

Even though both studies worked their investigations on the word level, the types of data differ in both studies, taboos are cultural related and need specific adjustments in translation to fit in the target culture. On the other hand, medical terminologies do not require any cultural adjustments, the meaning of the medical terminologies is almost unified in all cultures and languages. Utilizing different strategies could be due to the differences in topics, since the topic is taboo words, the translator/ subtitler utilizes different strategies to convey the

language in an appropriate manner, while the topics in scientific and medical languages is explicit and clear. On the other hand, Mohammed and Abed (2020) conclude from their study that literal translation was the most come strategy in transition topics related to death expressions.

As mentioned earlier, the strategies that the two studies have in common are the transfer strategy and the deletion strategy highlighted in green, while the differences are highlighted in red. Ben Slamia's (2020) study found that in the translation of taboo words from English into Arabic, the imitation strategy, the expansion strategy, and the paraphrase strategy were not utilized. In contrast, these strategies were found in the results of the current study for translating English medical terminologies into Arabic. It is also found that the dislocation and the resignation strategies were utilized in the results of Ben Slamia's (2020) study, however, these strategies were not adopted in the translation of English medical terminologies into Arabic in the current study. The comparison between the two studies further reveals that the transcription strategy, the condensation strategy, and the decimation strategy were not utilized in the translation of taboo words and in the translation of medical terminologies from English into Arabic.

7. Conclusion

The data analysis of the AV materials reveals that there were a number of subtitling strategies utilized in 92 medical terminologies found in the chosen medical terminologies. The results material that there were 64 (70%) medical terminologies adopting the transfer strategy, 12 (13%) medical terminologies adopting the paraphrase strategy, 9 (10%) medical terminologies adopting the deletion strategy, 6 (6%) medical expression adopting the expansion strategy, and 1 (1%) medical expression adopting the imitation strategy. In conclusion, five out of ten strategies were adopted by the translator/ subtitler in translating the medical terminologies in the chosen medical AV materials. The five strategies were expansion, paraphrase, transfer, imitation, and deletion. The strategies not found in the medical AV materials were transcription, dislocation, condensation, decimation, and resignation. The transfer strategy was the strategy the translator/ subtitler employed the most in translating the medical terminologies of the medical AV materials. The transfer strategy was also proven to be effectively fitting the medical context.

Furthermore, the transfer strategy helps the Arabic audience understand the meaning of medical terminologies more easily. In the second place, the paraphrase comes seconds in the number of frequencies after the transfer strategy. It was basically utilized to make the subtitles more readable and natural to the target audience. The current study's results are limited to the data of the current study. Different results might arise by utilizing other types of data and terminologies, which encourage the researchers to conduct other studies and make comparisons. The current study also helps the translators/ subtitlers, translation teachers, and students to know which strategies utilized are utilized the most.

References

Ako, M. S. (2013). *Assessing Media Accessibility for the Hearing Impaired through Subtitling*. M.A. Thesis. Unpublished. University of Buea.

Ben Slamia, F. (2020). Translation Strategies of Taboo Words in Interlingual Film Subtitling. *International Journal of Linguistics, Literature and Translation*, *3*(6). Accessible at: https://doi.org/10.32996/ijllt.2020.3.6.9

Börner, K. (2007) *Movies and Actors: Mapping the Internet Movie Database*. In Conference Proceedings of 11th Annual Information Visualization International Conference (IV 2007), Zurich, Switzerland, July 4-6, pp. 465-469, IEEE Computer Society Conference Publishing Services

Chaume, F. (2004). "Synchronization in dubbing". In Orero, Pilar (ed). *Topics in Audiovisual Translation*. Amsterdam and Philadelphia: John Benjamins, 35-52.

Chiaro, D. (2009). Audiovisual Translation. Routledge Encyclopedia of Translation Studies, 1–30.

Diaz Cintas, J., (2009). New Trends in Audiovisual Translation (ed.). Bristol: Multilingual Matters, p.283.

Díaz Cintas, J. (2004). "In search of a theoretical framework for the study of audiovisual translation". In Orero, Pilar (ed). *Topics in Audiovisual Translation*. Amsterdam and Philadelphia: John Benjamins, 21-34

Gambier, Y. (2003). Screen Trans-adaptation: Perception and Reception. The Translator 9: 2, 171–89.

Gambier, Y. (2013). *The position of audiovisual translation studies*. In C. Millán & F. Bartrina (Eds.), *The Routledge handbook of translations studies* (pp. 45–59). London, UK: Routledge.

Gottlieb, H. (2004). Language-Political Implications of Subtitling. In Orero, P. (Ed.). *Topics in Audiovisual Translation* (pp.83–100). Amsterdam and Philadelphia: John Benjamins Publishing Company.

Hurt, C., Widler, B., (1998). Untertitelung,Übertitelung. Handbuch Translation. Tubingen: Stauffenburg, pp.261–26.

Accessible at: http://www.transedit.se/bibliography.htm

Karamitroglou, F., (2000). Towards a Methodology for the Investigation of Norms in Audiovisual Translation. Amsterdam: Atlanta, p.300.

Khulusi, S. (1982*). Fannu T-tarjamah*, Baghdad AR-rashid Publishing. House.

Krings, H.P. (1986). Translation problems and translation strategies of advanced German learners of French. In J. House, & S. Blum-Kulka (Eds.), *Interlingual and intercultural communication* (pp. 263-75). Tubingen: Gunter Narr.

Kuhiwczak, P. and Littau, K. (Eds.). (2007*). A Companion to Translation Studies.* Clevedon, Buffalo, Toronto: Multilingual Matters LTD.

Lörscher, W. (1996). *A Psycholinguistic Analysis of Translation Processes*. Meta 41: 1, 26–32.

Luyken, G-M., Herbst, T., Langham-Brown, J., Reid, H. and Spinhof, H. (1991) Overcoming Barriers in Television. Manchester: EIM.

Michael B. (2012). *Analysis of Gottlieb's Subtitling Strategies in Trans 7's 'Home Stay'*, post-conference publication, Atma Jaya Catholic Univeristy, Jakarta.

Mohammed, H. G. (2015). *ITT and the Strategies of Interpreting Fixed Expressions in Arabic–English.* IOSR Journal of Humanities and Social Science (IOSR-JHSS), 20 (12), PP 61-70.

Mohammed, H. G. (2020). *Mailhac's Suggested Issues Audiovisual Translation: Translating and Providing Business Film Quotes.* Diyala Journal 83, 40-757.

Mohammed, H. G. & Abed, A. Q. (2020). *Investigating the Strategies of Translating Euphemism:The Case of Iraqi Students of Translation.* Journal of Education College Wasit University. 38(1), pp 727- 754.

Neves, J. (2004). "Subtitling: Written interpretation?". *Génesis – Revista de Traduçãodo ISAI* 4, 154-165.

Petillo, M. (2008). *Doppiaggio e sottotitolazione: problemi linguistici e traduttivi nel mondo della screen translation*. Bari: Digilabs.

Reiss, K. (1971). *Möglichkeiten und Grenzen der Übersetzungskritik. Kategorien und Kriterien für eine sachgerchte Beurteilung von Übersetzungen*. München: Max Heuber.

Schwarz, B. (2003). Translation in a Confined Space-Film Sub-titling with special reference to Dennis Potter's "Lipstick on Your Collar", Part 2. Translation Journal, Vol.7, No.1. Retrieved at: October 21, 2009.

 Accessible at: http://accurapid.com/journal/23subtitles.htm

Swinburne, A. C. (1925). Ballads of the English border, ed. William A. MacInnes. London: William Heinemann, Ltd.

Wang, Y (2021) The complex legacy of China's cinematic pirates. Sixth Tone, 30 March.

Accessible   at: https://www.sixthtone.com/news/1006972/the-complex-legacy-of-chinas-cinematic-pirates

Wayne, M. L. (2018). Netflix, Amazon, and branded television content in subscription video on-demand portals. Media, Culture & Society, 40(5), 725–741. Accessible at: http://dx.doi.org/10.1177/0163443717736118

Zhang Y. (2019). *Subtitle Translation Strategies as a Reflection of Technical Limitations: A Case Study of Ang Lee's Films*, Asian Social Science, Canadian Center of Science and Education.