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Identifying the Most Effective Strategies for Achieving Higher Accuracy in Audiovisual Translation

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Abstract
This study aims to identify and evaluate various audiovisual translation (AVT) strategies to determine which achieve the highest level of accuracy. By analyzing different techniques such as subtitling, dubbing, and voice-over, and comparing their effectiveness in translating technical terminology, the research seeks to provide insights into the optimal methods for high-fidelity translations. The focus will be on the accuracy of translations in technical fields.

Keywords: Audiovisual Translation, Subtitling, Dubbing, Voice Over, and AVT strategies.

Introduction
Audiovisual translation (AVT) plays a vital role in global communication, facilitating the transfer of audio-visual content across languages through methods such as subtitling, dubbing, and voice-over. Achieving high accuracy in AVT is crucial for preserving the original message, cultural nuances, and enhancing the viewer experience.

The complexity of AVT arises from the need to balance linguistic precision, cultural appropriateness, and technical constraints, especially when dealing with specialized content like aviation terminologies. Various strategies have been developed to address these challenges and improve translation accuracy.

Definitions of AVT
Luyken et al. (1991) define AVT as the process by which a film or television program is made comprehensible to target audiences who are unfamiliar with the source language in which the original was produced. Karamitroglou (2000, p. 1) states that *"audiovisual translation,* which is also known as *"screen translation"* or film translation., highlights the medium or platform where the translated content appears, such as TV, cinema, or video screens. Similarly, the translation of websites viewed on computer monitors could also be referred to as *"screen translation."*

According to Gambier (2003), the purpose of audiovisual translation (film, radio, television, and video media) is now being used, bringing to the forefront the multisemiotics dimension of all broadcast programming. At the same time.

Modes of AVT
Linguists including Chaume (2004), Perego (2012), and Gambier (2003) distinguish between modes of AVT. They categorize AVT modes as subtitling, dubbing, voice-over.

Subtitling
According to Chiaro (2009), subtitles are visual and involve the layering of written text onto the screen. Chiaro (22008) defines subtitles as *"rendering verbal messages in film media into different languages in the form of one or more lines of written text presented on the screen in accordance with the original written message."*.

According to Antonini (2005), subtitling is a type of linguistic transfer where only two lines of text can be displayed on a screen. The number of characters per line varies depending on the subtitling system used, but typically ranges from

20 to 40. To allow viewers to read and enjoy the content, a significant portion (40–75% in some cases) of the original text or dialogues must be reduced and condensed. (P,213)

According to Gottlieb (1992), subtitles are divided into two parts. Linguistically and technically, which are
Linguistically, there are two main types of subtitling:
(a) intralingual subtitling, which involves adding subtitles in the original language. This can be for domestic programs aimed at the deaf and hard of hearing or for foreign-language programs intended for language learners. Intralingual subtitling maintains the same language but changes the mode of communication from speech to writing.
(b) interlingual subtitling, where the subtitler translates speech from one language to another in writing. This type involves a shift in both mode and language (p.161).

Another distinction can be made based on technical processes:
(a) Open subtitles, which are not optional and are typically included directly in films or transmitted with the television broadcast.
(b) closed subtitling, which is optional and typically transmitted via teletext. This includes television subtitles for the deaf and hard of hearing, as well as interlingual television subtitles transmitted via satellite to accommodate different language communities simultaneously (Gottlieb,1992).

Dubbing

Chiaro (2008) defines dubbing as "aa *process that entails 'the replacement of the original speech by a voice track that attempts to follow as closely as possible the timing, phrasing, and lip movements of the original dialogue"* (P. 141)

Bosseaux (2019) points out that dubbing has been used for many years throughout the world. It is an example of 'isosemiotic' translation, in which information is transferred through the same semiotic channels in the source and destination texts (p. 48).

Gonzales (2020) states that lip-synchronized dubbing, also known as lip-sync, is one of the two most common types of film translation, along with interlingual subtitling.

Voice-Over

Chairo (2008) defines voice-over "as *a technique in which a disembodied voice can be heard over the original soundtrack, which remains audible but indecipherable to audiences; this modality of screen translation has been very much overlooked and under-researched by academics."* (p152)

AVT Strategy

The term strategy has two meanings in TS: limited and broad. Several linguists associate strategy with the idea of a problem. As a result, translation strategies are defined as techniques and procedures for solving a specific translation problem in the source material (Krings, 1986). Several researchers and scholars have investigated strategies in TS, such as Krings (1986).
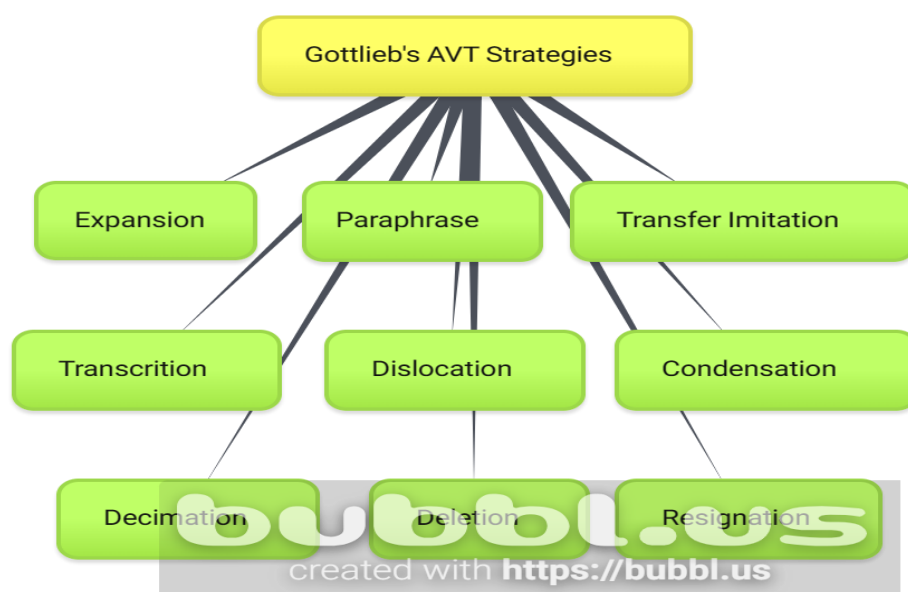

Figure (1): Gottlieb's (1992) AVT Strategies

1.The Expansion Strategy
According to Gottlieb (1992), expansion is a common strategy used in several cases where the SL needs an explanation.

2.The 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).

3.The Transfer Strategy
Transfer is the process of rendering the ST accurately and completely (Gottlieb, 1992).

4.The 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.

5.The 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).

6.The 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.

7.The 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).

8.The Decision Strategy
Decimation is considered an extended strategy and 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).

9.The Deletion Strategy
According to Gottlieb (1992), deletion is a 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.

10.The 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).

Technical Translation Methods
According to Pinchuck (1977:21), technical translation requires high qualifications if it is to be done properly. This means that technical translation is not an easy job to do. It requires comprehensive translation knowledge as well as qualification in the field being translated.

Hervey and Higgins (1992:165) define technical translation as "the translation *of empirical or descriptive texts written in the context of scientific or technological disciplines, which, like any other specialized field, has its own register, jargon, and genre-making characteristics"*.

Accuracy
Nababan (2004: 4) states that accuracy is a term of translation quality assessment (henceforth TQA), which refers to the extent to which a translation has the same idea as its original. It is without addition or reduction, meaning from SL to TL. It is usually referred to the preservation of the information content of SL in TL. It could be said that in translating a text, the translator should also consider the familiar language pattern that is usually used by the target readers. "Accurate" indicates that the source language meaning is accurately conveyed into the target language text; there is no meaning distortion. "Less Accurate" means that the meaning of the meaning of the source language is less accurately conveyed

into the target language. There are some meaning distortions. "Inaccurate," as indicated by the source language meaning, is definitely not accurately conveyed into the target language.

Text (5): Taxi

ST	TT
The speaker is the pilot to air traffic control stuff Ok, we are ready for taxi I will ask clearance	1- يرجى الانتباه الطائرة على المدرج 2- نحن بانتظار التكسي 3- نسير على المدرج الان 4- سيارة اجرة 5- الطائرة على المدرج 6- نحن مستعدون لطلب سيارة الاجرة 7- الانتباه الطائرة على المدرج 8- نحن مستعدون للتنقل 9- سيارة اجرة 10- سنستقل تكسي 11- نسير على المدرج الان

Documentary	Timing
Boeing 737 from cold and dark to ready for taxing *(BAA Training)*	0:37

Interpretation:
According to Marriam webster dictionary the STU means "*to operate an airplane slowly or to go slowly speed along the surface of the graund". or "to operate an aircraft on the ground under its own power*".

Discussion:
The uttrances No. (1,3,5,7,8,11,) have been rendered accurately, the (STU) have been translated into target text utterance as the meaning is conveyed and نحن على الارض الان,تدرج الطائرة. يرجى الانتباه الطائرة على المدرج, للاقلاع الجوي (TTU)in Arabic the TTU reader understand that the plane on runway , So the rendition is clear to the TTU and is accurate because the intended meaning is matched in the TTU rendition.

According to Geotllieb's strategies, the translators use transfer strategy when they render the STU "taxi" into TTU. They use this strategy to give the audacity a clear picture and correct meaning. The STU Nos. (2, renderd inaccurately into the TTU; the translators used a literal translation, which makes the TTU unclear and incomprehensible for the readers. The renderings No. (1,3,5,7,811). Are less readable into TTU, due to the meaning not being fully understood by TTU readers, the rendition into Arabic as TTU doesn't match well enough due to differences in language structure. Meanwhile, STU Nos. 2, 4, 6, 9, and 10 are considered unreadable and incomprehensible and don't give a clear meaning of TTU. They are rendered using the expansion strategy, which does not match the meaning. The researcher, however, believes that the rendering of "taxi" into different renderings does not closely represent the STU.

The researcher firmly believes that the term 'taxi" does not much mean the utterance of TTU. Also, the whole meaning of the utterance doesn't give a clear picture of the situation for the TTU readers and is considered unreadable due to the meaning of the utterances being unclear and incomprehensible for the audience. They don't understand the whole meaning of the utterances as in TTU, and the rendition into TTU is not accurate.

Table (9): Analysis the Term (Taxi)

Title	No	Accuracy	Score	Readability	score	Appropriate	unappropriate
SLT ENG.	1						
	T1	accurate	3	Less readable	2	-	+
	T2	inaccurate	1	unreadable	1	-	+
	T3	accurate	3	Less readable	2	+	-

TLTs Arb.	T4	inaccurate	1	Less readable	2	-	+
	T5	accurate	3	Less readable	2	+	-
	T6	inaccurate	1	Less readable	2	-	+
	T7	accurate	3	Less readable	2	+	-
	T8	accurate	3	Less readable	2	+	-
	T9	inaccurate	1	Less readable	2	-	+
	T10	inaccurate	1	Less readable	2	-	+
	T11	accurate	3	Less readable	2	+	-
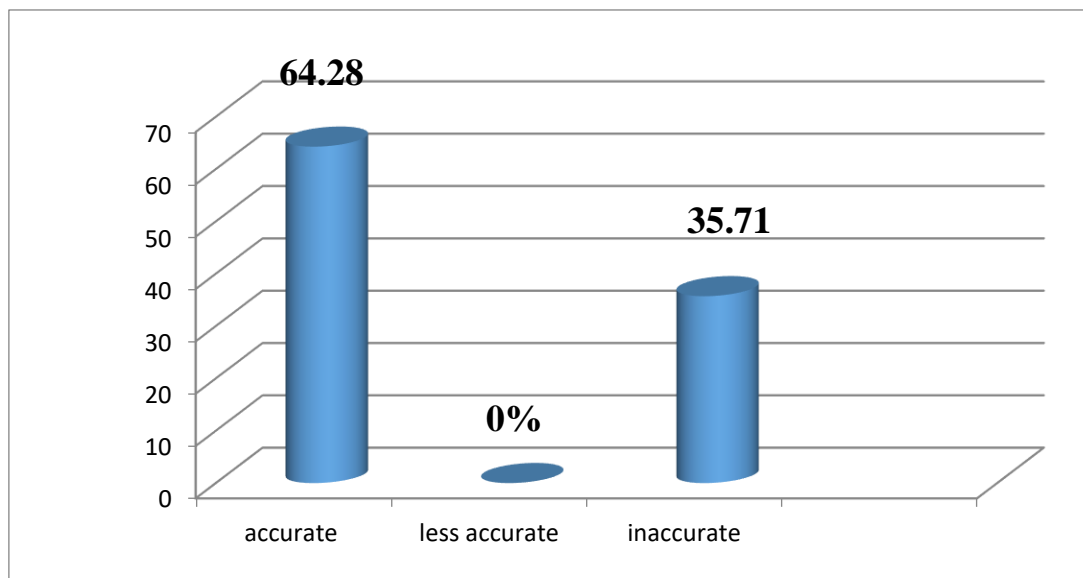
Chart (1): Translation Accuracy Result of (Taxi)

Text (6): Ferry Flight

ST	TT
Now you guys kow what a ferry flight is I'm going to enjoy this "ferry flight".	1- رحلة العبارة 2- رحلة العبور 3-رحلة 4- رحلة الطيران الاستكمالية 5- رحلة النقل الجوي 6- رحلة عاجلة 7- طيران مشروع 8- خدمة الطيران 9- طيران نقل 10- رحلة صيانة للطائرة 11- رحلة للصيانة الطائرة

Documentary	Timing	
27 pilot's phrases passengers know nothing about **(bright side)**	0:37	

Interpretation:

The term ferry flight "means A flight intended to return an aircraft to base; deliver a new aircraft from the manufacturer to the purchaser; move an aircraft from one operations base to another; or moving an aircraft for the purpose of maintenance. (Epic Flight Academy)

Discussion:

The renderings of uttrances No. 1 to 9 into TT are inaccurate because all the translators use literal translation, which makes the TT difficult for audiences or readers to understand. for example, the utterance ferry flight in ST refers to an empty plane with no passengers or cargo on board that is flown from one place to another, but all the translators miss the intended meaning. The TT renditions are considered inaccurate because there is a distortion of the meaning of the utterances, making their meaning unrecognizable and incomprehensible to the TT readers.

Meanwhile, the rendering of the utterences NO. (10, 11) into TTU accurately and conveying the correct meaning رحلة بلا مسافرين لاغراض الصيانة الطائرة او ضروف تشغيلية وقت الحاجة According to Nabban's model, renderings No. 1 to 9 are considered unreadable. Unreadability means that the utterances cannot be easily read and understood by TT readers. There is no connection to the context of the utterances, making the TT unreadable because the translators provided unrelated and incomprehensible meanings in Arabic. In such cases, translators should have a better understanding of the ST culture. Utterances No. (10, 11) are rendered as readable and understandable in the TT.so the translators (10,11) use transfer strategy which gives the audacity a clear picture and correct meaning. While the other translators use the paraphrasing strategy which does not convey the correct meaning.

Utterances No. 1 to 9 show no correlation between the translation of the utterances as aviation terms into the TT, and the translations do not accurately convey the meaning in Arabic. The translations reveal a clear difference and do not give the desired meaning of the utterances. According to Nabban's model, these renditions are considered inaccurate. They do not provide a clear picture of what is happening when travelers hear the ST on the plane. This is critical, as the utterances indicate serious situations that the plane is passing through. Therefore, the translator must handle the translation of these utterances with professionalism and accuracy, reformulating them according to the general culture of the reader.

Table (2): Analysis the Term (Ferry Flight)

| Title	No	Accuracy	score	Readability	score	Appropriate	unappropriate
SLT ENG.	1						
TLTs Arb.	T1	inaccurate	1	unreadable	1	-	+
	T2	inaccurate	1	unreadable	1	-	+
	T3	inaccurate	1	unreadable	1	-	+
	T4	inaccurate	1	unreadable	1	-	+
	T5	inaccurate	1	unreadable	1	-	+
	T6	inaccurate	1	unreadable	1	-	+
	T7	inaccurate	1	unreadable	1	-	+
	T8	inaccurate	1	unreadable	1	-	+
	T9	inaccurate	1	Less readable	2	+	-
	T10	accurate	3	readable	3	+	-
	T11	Accurate	3	readable	3		
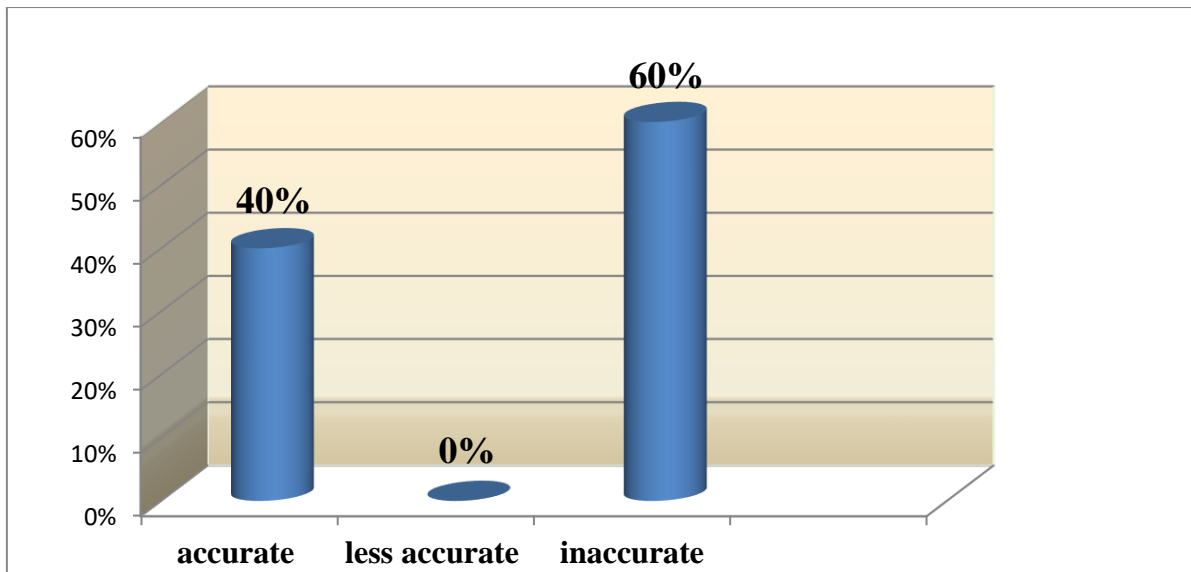
Chart (2): Translation Accuracy Result of (Ferry Flight)

Findings

- Most translators (63%) fail to achieve complete accuracy when translating aviation terminology from English to Arabic. This is primarily due to the specialized nature of aviation terminology. For example, terms like "yaw" and "ailerons" frequently lack direct Arabic equivalents, resulting in a variety of translations that may fail to capture the technical meaning. This disparity highlights the difficulty translators face when maintaining the precision required for technical content.

- According to the study, most translators (63%) use a literal translation strategy when dealing with aviation terminology. Whereas The analysis found that approximately (36%) of translators use the transfer strategy, which entails accurately rendering the meaning of the source text (ST) into the target text (TT). These translators are successful in producing completely accurate translations.

- Statistically, (2) source language (SL) texts were assigned to 11 M.A. students, yielding a total of 22 renderings. Of these, 8 (36%) were accurate translations, demonstrating the translators' expertise in translating aviation terminology and the translators use transfer strategy which convey the correct meaning. However, 14 renderings (36%) were inaccurate translations, indicating that the translators preferred to use the paraphrase strategy, which sacrificed technical precision. Furthermore, 14 renderings (63%) were inaccurate translations, owing primarily to the reliance on the paraphrase translation method, highlighting a significant challenge in achieving precise and reliable translations in the aviation industry.
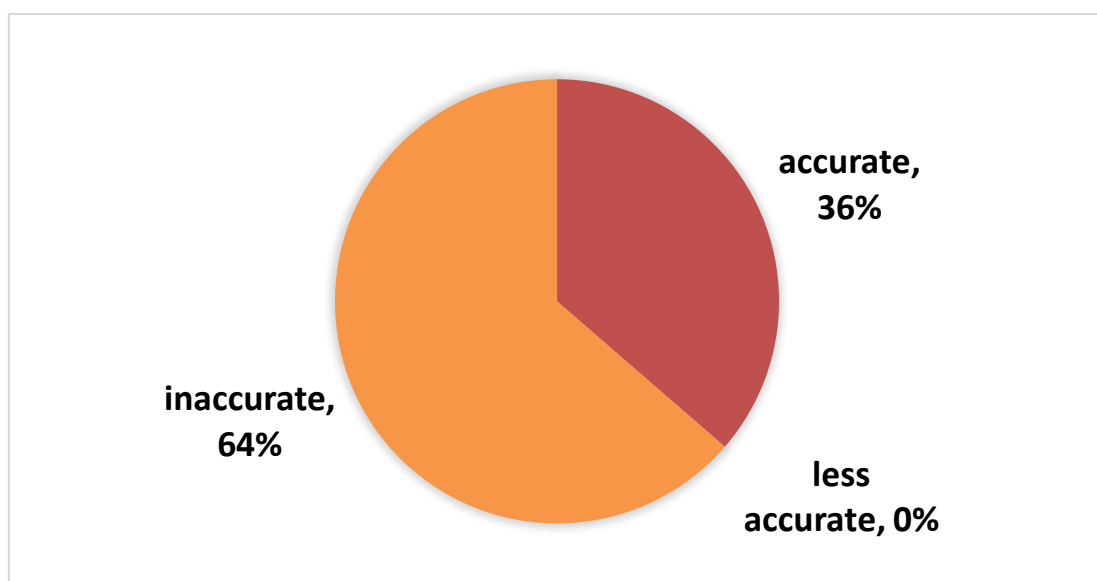

Chart (3): Terminologies' Accuracy Percentages Based on Nababan (2012)

Conclusions

The present study has come to the following conclusions:

- Technical translation requires strong linguistic and professional skills. Professional translation of technical documents requires a specialized translator with prior experience and knowledge of the subject.
- The use of specialized language is one of the most difficult aspects of translating aviation terminology. For example, when translating a document about aircraft operations and usage, the translator must be familiar with the specific terms for aircraft components and other aviation concepts in the target language. Furthermore, to avoid reader confusion, terminological consistency must be maintained, with the same term used throughout the document.
- The study indicates a predominant reliance on literal translation strategies, resulting in inaccurate renderings that do not convey the intended meaning from the source language (SL) to the target language (TL). The term "elevator," which refers to a specific aerodynamic condition in aviation, is often translated literally into Arabic as "مصعد" or رافعة اثقال, which misrepresents the technical context and can mislead the audience. Whereas the others translation use transfer strategy which achieves accurate translations.

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