rEFLections
Vol 32, No 3, September - December 2025

On Extralinguistic Cultural Reference: The Translation of Thai Color Terms in English Subtitles

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Article information
Article history:
Received: 1 Mar 2025
Accepted: 3 Oct 2025
Available online: 10 Oct 2025

Keywords:
Color terms
Extralinguistic cultural references
Quality
Subtitles
Translation

Abstract

When translating cultural references in subtitles from Thai to English or vice versa, most previous studies often rely on Newmark's (1988) and Baker's (1992) broad typologies of translation strategies for textual analysis. Moreover, these studies often focus solely on identifying the most commonly used strategies without delving into the extent to which the translation is constrained by spatial and temporal dimensions. This study, therefore, aimed to address these gaps with twofold objectives: 1) to adopt Pedersen's (2011) more recent taxonomy for rendering Extralinguistic Cultural References (ECRs) in the analysis of the translation of Thai color terms in English subtitles, and 2) to explore to what extent such translation meets spatial and temporal requirements of subtitling. The analysis employed a mixed-method approach. Using both qualitative and quantitative methods with the mainstream Thai drama Good Heavens! I'm a Goose, Not a Swan (Lopanpaibul, 2025), rich in culturally specific color terms, this study examined translation strategies applied in translating Thai color terms in the English subtitles. Then, a quantitative approach was used by applying a formula developed from Díaz-Cintas and Remael's (2021) technical considerations and Netflix's (2025a) style guide to shed light on audiovisual constraints. The study found that the translator employed three strategies, i.e., Generalization, Direct Translation, and Substitution. Generalization, in particular, was the most frequently used strategy to achieve clarity and brevity. However, while this strategy suited the spatial dimension, the subtitles were displayed too quickly for comfortable reading.

INTRODUCTION

In Thailand, the development of color terms has progressed over time from simpler to more intricate forms (see Engchuan, 2000; Phornthipphayaphanit, 2014; Tipkongka, 2010). Interestingly, some of these terms even deviate from the well-established color evolution model proposed by Berlin and Kay (1969). According to Honghengseng (2021) and Surrallés (2017), the terms used for colors vary across societies and cultures depending on their unique environments and contexts. Meanwhile, the symbolic meanings attached to specific colors differ between languages and cultures (Stanley-Thorne, 2003). Color naming is further complicated by the interplay of subjective perception and cultural differences (Frumkina, 1984, as cited in

Wierzbicka, 1990). This brings out the fact that the complexities of color involve linguistic, cultural, and perceptual dimensions.

While color terms pose several inherent challenges, translating them is particularly difficult, since translators must navigate the intersection of linguistics, translation, culture, and color concepts. Still, finding an appropriate equivalent can often be problematic (Uusküla, 2019). When no equivalent exists in the target culture (hereafter TC), or when the audience does not know the term, Catford (1965) called this *transference*, and Rabadán (1991, as cited in Díaz-Cintas & Remael, 2007) called it a *referential vacuum*. Additionally, Stanley-Thorne (2003) emphasizes that translators must account for various challenges to avoid potential issues which include the boundaries or spectrums of each term, polysemy, the use of specific modifying terms, color symbolism, and the application of color terms in fixed expressions.

What is worse, the challenges of translating color terms become even more pronounced in audiovisual media. In this context, translators must not only navigate the complex interplay between linguistics, translation practices, cultural nuances, and color concepts but also contend with additional constraints of the medium. These include spatial limitations, such as fitting translations into on-screen text or subtitles, and temporal restrictions, like ensuring that the translation aligns with the timing of the visuals and dialogue (Díaz-Cintas & Remael, 2007). These added pressures demand creativity and precision, as translators must balance accurate representation of meaning with the practical realities of audiovisual formats.

The Thai drama *Good Heavens! I'm a Goose, Not a Swan* (Lopanpaibul, 2025) serves as a good example of the challenges involved in translating Thai color terms into English subtitles within the spatial and temporal constraints of audiovisual media. The drama focuses on a modern woman who inhabits the body of a courtesan during the era of King Rama III in the early Rattanakosin period and is forced into sex work. To free herself from the brothel, she must take on various tasks, one of which is selling fabrics in different colors that reflect the Thai way of life and culture. Set against the backdrop of the Rattanakosin period (Bangkok period), a time when color terms were historically classified into as many as ten categories (Phornthipphayaphani, 2014), the drama introduces color terms that have become rarely heard in modern times. This has sparked discussions among Thai viewers on Facebook, with many questioning the relevance of these terms in contemporary Thai language. This observation aligns closely with Honghengseng's (2021) argument that traditional Thai color terms are increasingly fading from everyday use. Such terms are now primarily familiar to craftsmen and older generations, while younger generations often have little to no exposure to them.

A review of prior research on translating cultural references in audiovisual media reveals that most studies (e.g., Kosumpan, 2023; Mamoon et al., 2023; Saekoo, 2022; Somsin, 2024) tend to rely on the broad typologies of translation strategies proposed by Baker (1992) and Newmark (1988) for textual analysis. Also, these studies often focus on identifying the most frequently used strategies without adequately addressing the extent to which spatial and temporal constraints impact the translation process. To bridge these gaps, the present study adopts Pedersen's (2011) more recent taxonomy for analyzing the rendering of Extralinguistic Cultural References (ECRs) and examines the translation of Thai color terms in English subtitles.

Additionally, it investigates the extent to which such translations adhere to the spatial and temporal requirements of subtitling. Specifically, the study seeks to answer two questions: 1) What translation strategies are employed to render Thai color terms in *Good Heavens! I'm a Goose, Not a Swan* into English subtitles? and 2) To what extent do these translations meet the spatial and temporal requirements of subtitling?

LITERATURE REVIEW

Color terms in the Thai language

In 1969, Berlin and Kay proposed a theory of cross-cultural color concepts based on the idea of basic color terms (BCTs). This theory posits that all languages possess a finite set of fundamental color terms, which follow a universal and hierarchical pattern of development across cultures. According to Berlin and Kay (1969, as cited in Prasithrathsint, 1995), BCTs are defined by the following characteristics:

1. They are monolexemic, meaning the word's meaning cannot be predicted from its components, like *red* and *green* in English.
2. They are not combinations of other colors, such as *dark green*, which falls under the broader term *green*, or *crimson*, which is considered part of *red*.
3. They are not specific to describing particular objects, such as *blonde* in English, which is typically used only for hair or furniture.
4. They are psychologically salient or well-known and commonly used by a speech community, such as *red*, *green*, and *yellow*.
5. They are predictable from grammar, such as *red*, which can take the suffix *-ish*, unlike *crimson*, which does not have a similar form.
6. They are the names of specific objects used as color terms, such as *orange*.
7. They are not derived from loanwords, such as *chocolate*.

Here, non-basic color terms (non-BCTs) are those outside these characteristics.

The Office of the Royal Society (2013) defines "color" as features that are visibly seen and notes that there is a wide range of color terms in Thai. Some of these terms refer to actual colors, while others, along with their literal translations in parentheses, are based on comparisons to objects, such as *สีฟ้า* (sky), *สีส้ม* (orange), *สีน้ำเงิน* (melted silver), *สีเงิน* (silver), and *สีน้ำตาล* (sugar). Color terms in Thai can be categorized as follows (Office of the Royal Society, 2013):

1. colors compared to plants, such as *สีเผือก* (taro), *สีดอกเลา* (*saccharum*), *สีคราม* (*Indigofera tinctoria*), *สีฝาด* (shore tree), *สีโศก* (Ashoka tree), *สีมะเกลือ* (*Diospyros mollis*), *สีหมากสุก* (ripe betel nut), and *สีชาด* (*Dipterocarpus obtusifolius*).
2. colors compared to animals or their parts, such as *สีเทานกพิราบ* (pigeon gray), *สีครั่ง* (*Kerriidae*) or *สีแดงเลือดนก* (bird blood blood)/*สีตากุ้ง* (shrimp eyes), *สีขี้ม้า* (horse droppings), *สีขี้นก* (bird droppings), *การเวก* (bird-of-paradise), *สีงาช้าง* (ivory), *สีเขียวหัวเป็ด* (duck head green), *สีไข่ไก่* (chicken egg), and *สีแดงเลือดหมู* (pork blood red).

3. colors compared to nature, such as *สีปูนแห้ง* (dried lime), *สีฝุ่น* (dust), *สีมรกต* (emerald), *สีน้ำทะเล* (seawater), *สีทอง* (gold), *สีนิล* (black spinel), *สีตะกั่วตัด* (cut lead), *สีรุ้ง* (rainbow), and *สีหมอก* (mist).
4. colors compared to things used in a house, such as *สีกะปิ* (shrimp paste), *สีหม้อใหม่* (new pot), and *สีน้ำตาลไหม้* (burnt sugar).
5. colors from abroad, such as *สีโกโก้* (cocoa), *สีโอลด์โรส* (old rose), *สีแทน* (tan), *สีเบจ* (beige), *สีกากี* (khaki), *สีบรอนซ์* (bronze), and *สีชา* (tea).
6. colors derived from institutional uniforms, such as *สีกรมท่า* (Foreign Department)[1].

The above coinage of color terms, as the Office of the Royal Society (2013) notes, illustrates the richness and diversity of the Thai language in reflecting the environment, cultural practices, and way of life. The use of natural objects, foreign influences, and combinations of terms mirrors the dynamic nature of language, which evolves and adapts to the changing context of society. These varied sources of color terms not only convey vivid visual experiences but also highlight the Thai people's deep connection to nature, daily life, and cultural identity. The complex and metaphorical ways of naming colors, therefore, show how deeply intertwined language and culture are.

Color terms in Thai have developed over time from simpler to more complex forms. During the Sukhothai period (1238-1438), there were five BCTs, i.e., WHITE, BLACK, RED, YELLOW, and GREEN[2] (Engchuan, 2000). Later during the Ayutthaya period (1351-1767), there were nine BCTs. The five colors from the previous period were retained, with PINK appearing between 1448-1483, ORANGE between 1602-1627, and LIGHT BLUE and PURPLE both emerging simultaneously sometime between 1732-1758 (Tipkongka, 2010). Subsequently, during the Thonburi period (1767-1782), there were only six BCTs, i.e., WHITE, BLACK, RED, YELLOW, GREEN, and PURPLE, all carried over from the previous period. No additional BCTs were introduced, partly because the period lasted only 15 years and there was limited evidence (Phornthipphayaphanit, 2014). Finally, during the Rattanakosin period (1782-1932), the number of BCTs increased to twelve, namely WHITE, BLACK, RED, YELLOW, GREEN, PINK, ORANGE, LIGHT BLUE, PURPLE, GREY, DARK BLUE, and BROWN. This represented the addition of three new BCTs compared to the antecedent periods, with GREY first appearing in 1797, DARK BLUE in 1805, and BROWN in 1807 (Phornthipphayaphanit, 2014). It should be noted that, in Thai, light blue and dark blue are considered BCTs, unlike in Berlin and Kay's (1969) color evolution model. This suggests that Thai color terms are more developed than the universal BCTs.

Phornthipphayaphanit (2014) applied Berlin and Kay's (1969) concept and visually presented the evolution of the mentioned Thai color terms in a tabular timeline below.

[1] สีกรมท่า [sĭi krom ma thâa] was the color of the uniforms worn by the *Krom Tha* officials during the early Rattanakosin period. *Krom Tha* was a government department under the jurisdiction of the Royal Treasury, responsible for diplomacy, foreign affairs, and the administration of port cities (Office of the Royal Society, 2010).

[2] Linguists frequently capitalize color terms to indicate their universal application (Phornthipphayaphanit, 2014).

Table 1

The evolution of Thai color terms (Phornthipphayaphanit, 2014)

Phases I-V[3]	1448	1602	1732	1797-1483	1805-1672	1807-1758
WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE
YELLOW	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW
			ORANGE	ORANGE	ORANGE	ORANGE
RED	RED	RED	RED	RED	RED	RED
	PINK	PINK	PINK	PINK	PINK	PINK
GRUE[4]	GRUE	GRUE	PURPLE	PURPLE	PURPLE	PURPLE
			BLUE	BLUE	LIGHT BLUE	LIGHT BLUE
					DARK BLUE	DARK BLUE
BLACK	BLACK	BLACK	GREEN	GREEN	GREEN	GREEN
			BLACK	GRAY	GRAY	GRAY
				BLACK	BLACK	BROWN
						BLACK

More precisely, during the Rattanakosin period, non-BCTs arose from the following ten sources, as identified by Phornthipphayaphanit (2014):

1. modifying BCTs with adjectives, e.g., *ม่วงอ่อน* (light purple)
2. modifying BCTs with non-BCTs, e.g., *เขียวตอง* (banana leaf green)
3. using specific objects as color terms, e.g., *สีจันทร์* (Diospyros decandra)
4. using foreign color terms, e.g., *เศวต* (white, from Sanskrit)
5. modifying the name of specific objects used as color terms, e.g., *เงินงาม* (silver white)
6. modifying foreign color terms with adjectives, e.g., *สุพรรณพราย* (bright yellow)
7. using the color terms that can be included within other color terms, e.g., *สีนวล* (yellowish white)
8. modifying specific colors within other non-BCTs with adjectives, e.g., *คล้ำมัว* (pale black)
9. compounding two BCTs, e.g., *ดำแดง* (black-red)
10. using color terms that were restricted to certain objects, e.g., *สีกะเลียว* (the color of a horse that is a mix between green and black)

Subtitle translation

Unlike written translation, which involves text on a page, audiovisual translation (hereafter AVT), as the name suggests, focuses on content that includes both audio and visual elements. It emphasizes the practices, processes, and outcomes involved in transferring multimodal and multimedia content. Scholars generally identify around ten types of audiovisual translation, which can broadly be categorized into two main subgroups: revoicing and subtitling (Matkivska, 2014). However, since this study focuses specifically on subtitling, the literature review will concentrate on subtitling in particular.

Subtitling, often referred to as screen translation, is a highly complex process due to the intricate multimodality of texts, which incorporate unique semiotic, interlingual, and cultural features.

[3] The five colors are grouped in Phases I-V because there is no evidence to suggest which one came first during the Sukhothai period (Phornthipphayaphanit, 2014).

[4] In the color term theory, “grue” refers to a single-color term that encompasses both blue and green (Berlin & Kay, 1969).

This complexity gives rise to three primary challenges, namely linguistic, cultural, and technical constraints (Mudawe, 2023). Here, the linguistic constraint begins with the challenge of accurately conveying the meaning of the source language (hereafter SL) dialogue while adapting it to the grammatical, syntactical, and lexical structures of the target language (hereafter TL) (Díaz-Cintas, 2010). Next, cultural challenges arise from the need to bridge cultural gaps to ensure that AVT resonates with the target audience. Cultural differences often necessitate adaptations or even complete rewrites to convey the intended message effectively. Direct translations may fail to capture the nuances of the original language and thus make cultural sensitivity essential to avoid misunderstandings or loss of meaning (Linguaserve, n.d.). Hence, the translator's role is often seen as that of a "cultural mediator" (Katan, 2014).

In addition to linguistic and cultural challenges, subtitlers often face another layer of complexity stemming from technical constraints. Subtitling is basically limited by its need to maintain synchrony with both the image and sound. This means that subtitles must align with the actions of the characters on screen and should not contradict them. Additionally, time is a crucial factor, as the translated message must be delivered in sync with the original speech (Díaz-Cintas & Remael, 2007). Time constraints require subtitles to sync with the audio as well as allow enough time for viewers to read them without disrupting the scene's flow. In addition, space always poses significant challenges, as it is limited by the need to condense dialogue while ensuring it fits within the designated area without obstructing visuals. Because of this, the subtitler must adjust the translation to align with the appropriate subtitle events by taking into account the spatial and temporal constraints of each scene, as well as the subtitling display rate applied throughout the program (Díaz-Cintas & Remael, 2021). This type of adaptation, therefore, entails different subtitling strategies such as generalization, omission, using synonyms, or contraction.

Díaz-Cintas and Remael (2021) highlight two key features of subtitling, namely spatial and temporal dimensions, and emphasize the technical considerations involved in subtitling as follows:

1. Spatial dimension

1.1 Maximum number of lines and position on screen

According to industry standards, ideal subtitles should be unobtrusive and not draw attention to themselves, either through form or language. This is why, as a general rule, interlingual subtitling is typically limited to a maximum of two lines, which cover no more than one-sixth of the screen image (Díaz-Cintas & Remael, 2021).

1.2 Maximum number of characters per line

Many subtitling vendors still impose a maximum number of characters per line for subtitlers. For TV, cinema, and DVD, the standard has long been 37 to 39 characters per line, including spaces and punctuation, while video-on-demand (VOD) platforms like Netflix are now extending this limit to accommodate up to 42 characters for most languages (Díaz-Cintas & Remael, 2021), while Thai is allowed up to 35 characters per line (Netflix, 2025b).

2. Temporal dimension

2.1 Duration of subtitles

The maximum amount of text per subtitle is influenced by the safe area, line length, and speaking duration. Traditionally, the recommended exposure time for a full two-liner subtitle (35-42 characters per line) is six seconds. However, with the increase in dialogue density and viewers' familiarity with reading fast-paced text, the maximum display time has been reduced to five seconds in some cases. An exception is the subtitling of songs, where the subtitle can stay on screen for up to seven seconds if the rhythm requires it (Díaz-Cintas & Remael, 2021).

Subtitles that stay on screen longer than necessary can lead viewers to re-read them, so subtitling programs alert professionals when subtitles are displayed for too long relative to the amount of text. To adjust, the solution is either to increase the text length or reduce the on-screen duration. When spotting longer dialogue, any chunk lasting more than six seconds should be reconsidered and split into smaller units, especially if it involves the same speaker. Subtitles should be split at natural pauses or logical points in the sentence to ensure clarity and readability (Díaz-Cintas & Remael, 2021).

2.2 Subtitle display rates: Characters per second and words per minute

Traditionally, "reading speed" has been used to describe subtitling parameters, but it is more accurate to refer to it as "subtitling speed" or "subtitle display/presentation rate." This rate reflects the relationship between the amount of text in a subtitle and the time it remains on screen. It is measured using characters per second (CPS) or words per minute (WPM) (Díaz-Cintas & Remael, 2021). Díaz-Cintas and Remael (2021) also added that a subtitle that is too long may go unread by some viewers, while one that is too short might seem lacking in detail and could be read before the actor finishes speaking.

Before digital media, subtitling followed the "six-second rule," which posited that an average viewer could comfortably read two subtitle lines containing up to 74 characters (37 per line) in six seconds (Díaz-Cintas & Remael, 2021). However, subtitling standards have evolved with the rise of over-the-top media providers like Netflix, which has significantly influenced the profession. Netflix introduced longer subtitle lines of up to 42 characters and helped standardize the use of CPS over WPM for measuring display rates. A rate of 17 CPS (approximately 200 WPM) is now becoming the industry norm for general programming aimed at adults (Díaz-Cintas & Remael, 2021).

In conclusion, subtitlers must pay careful attention to both the spatial and temporal dimensions to ensure that subtitles are clear, accurate, and unobtrusive. By adhering to guidelines on line length, character count, and appropriate timing, subtitlers can create subtitles that align with the original dialogue while enhancing the viewing experience. Proper synchronization is thus essential to maintaining internal cohesion and clarity.

Translating cultures in subtitles

As previously discussed, one of the significant constraints in AVT pertains to culture. Cultural challenges in AVT may involve elements such as cultural references, humor, and wordplay, among others (Díaz-Cintas & Remael, 2021). In Translation Studies, various scholars have explored cultural references and used different terms to describe them, such as cultural words (Newmark, 1988), culture-specific concepts/items (Baker, 1992), cultureme (Nord, 1997), culture-bound terms (Díaz-Cintas & Remael, 2007), and more recently, extralinguistic cultural references (Pedersen, 2011).

Although cultural references in audiovisual media have attracted attention in previous studies, particularly in the context of Thai-English translation or vice versa, most of these studies (e.g., Kosumpan, 2023; Mamoon et al., 2023; Saekoo, 2022; Somsin, 2024) focus broadly on various types of cultural references and report the most popular strategies without delving into the extent to which the translation is constrained by spatial and temporal requirements. Furthermore, many of them rely either on Baker's (1992) or Newmark's (1988) typology of translation strategies to address issues related to Thai culture.

Newmark's (1988) typology for dealing with cultural references specifically includes 12 strategies. However, despite his well-known practical implementation of translation, Budiman et al. (2023) argue that Newmark's translation theory is excessively rigid and promotes strict guidelines without adequately considering situational or cultural nuances. They also highlight that the excessive use of terminology poses a barrier to progress in translation theory. They, therefore, highlight the need for a more adaptable framework. By contrast, Baker's (1992) typology encompasses eight strategies for non-equivalence at the word level. While some of these strategies are not entirely relevant to AVT, the typology also lacks a potential strategy present in Newmark's framework. With the above proviso considered, this present study aims to explore newly developed strategies, specifically designed to address the translation of color terms in an audiovisual medium.

Pedersen (2011) proposed the term "Extralinguistic Cultural Reference (ECR)" to refer to a cultural linguistic expression that points to an entity or process outside of language itself, such as places, people, institutions, customs, or food, which may not be known to all speakers of the language. ECRs rely on the encyclopedic knowledge of the audience, meaning that the referent should be identifiable to those familiar with the culture in question (Pedersen, 2011). He used this term particularly in subtitle translation and, in turn, proposed seven strategies. The figure below contrasts Pedersen's typology (2011) with those of Baker (1992) and Newmark (1988) and highlights certain limitations in the latter two approaches.

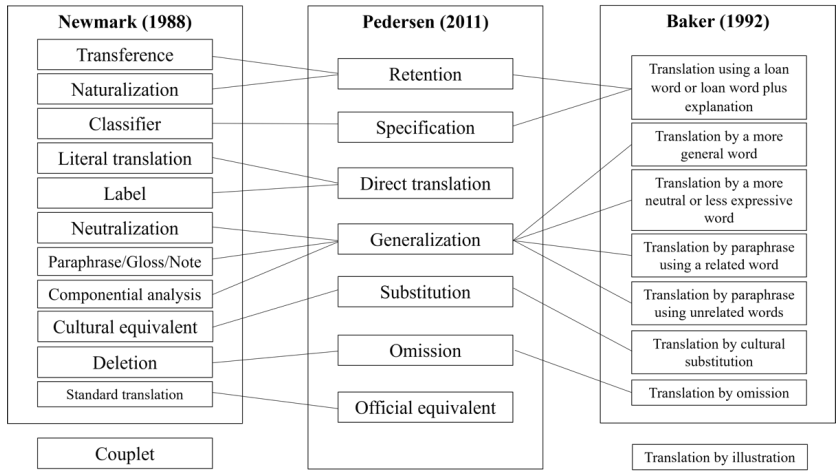

Figure 1 The comparison of Pedersen's translation strategies with those of Newmark and Baker

The figure illustrates that while Newmark's (1988) typology is comprehensive, it often overlaps and, as noted by Budiman et al. (2023), requires consideration of multiple factors. For example, transference and naturalization are likely to overlap when a word is taken from the SL but slightly changed to fit the TL. For example, "pizza" might keep its spelling through transference (e.g., พิซซา [pʰít saa]) while its pronunciation undergoes naturalization to align with the phonetic patterns of another language, such as Thai, where word stress often falls on the second syllable (e.g., พิซซ่า [pʰít sâa]). Another example is neutralization, where functional equivalence and descriptive equivalence can overlap. Functional equivalence emphasizes conveying the same role or purpose of a term, while descriptive equivalence focuses on explaining its meaning. These strategies overlap when a translator combines both approaches by explaining a concept's purpose and providing additional details to ensure the audience understands its role and context. These are some examples, to name but a few. In contrast, Baker's (1992) typology lacks a direct or literal translation strategy, and translation by illustration is inapplicable to AVT. Taking these limitations into account, Pedersen's taxonomy offers a comprehensive yet concise alternative to the existing strategies. Specifically, his taxonomy is visually represented in the figure below, designed to address ECRs in subtitles, ranging from minimal to more interventional changes.

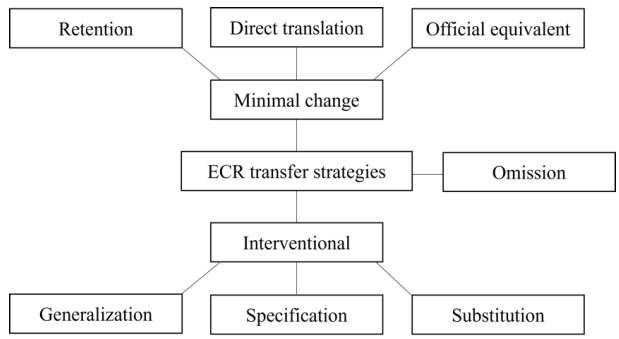

Figure 2 Translation strategies for rendering ECRs in subtitles (Pedersen, 2011)

The figure simplifies the distinction between minimal change and interventional strategies as well as suggests a clear-cut boundary that is actually more complex. The minimal change strategies, such as Official Equivalent and Direct Translation, add no new information but still make the ECR more familiar to viewers. On the other hand, interventional strategies like Generalization and Substitution do not provide direct access to the original ECR but offer a similar or generalized sense of it. These strategies, along with Omission, help viewers make sense of the ECR in the context, and they align with the broader definition of accessing the ECR's meaning strategies (Pedersen, 2011). The definitions of the seven strategies and their two levels of operation, i.e., the text level, representing the source text (hereafter ST) and target text (hereafter TT), and "the world," where the referents of the ECRs in both the ST and TT can be found, are listed and schematically illustrated below.

1. **Retention** refers to keeping the ST ECR in the subtitle without change, or with minimal adaptation to fit the requirements of the TL. It may be distinguished from the rest of the text, for example, by using italics (Pedersen, 2011).

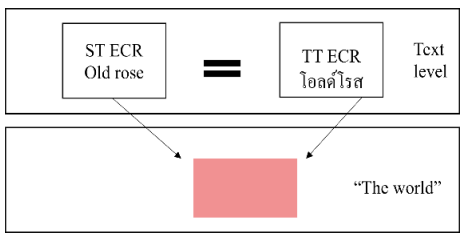

Figure 3 Retention

2. **Specification** involves retaining the ECR in its untranslated form, but adding more details to make the subtitled ECR more specific than the ST ECR. This can be achieved by expanding a name or acronym or by including additional semantic content, such as adding someone's occupation or an evaluative adjective (Pedersen, 2011).

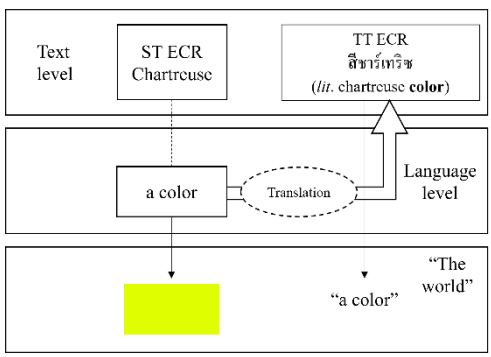

Figure 4 Specification

Basically, Specification is a far more intricate process than Retention, as it encompasses not only the text level, where the ST and TT exist, and "the world," but also what can be referred to as "the language level" (Pedersen, 2011). This level involves the SL and TL or potentially the cognitive level, where linguistic processes like translation and sense manipulation occur

(Pedersen, 2011). The dashed circle at the language level highlights that translation may, but does not necessarily, play a role in the Specification strategy.

3. **Direct Translation** is a strategy where only the language is changed, with no alteration to the meaning (Pedersen, 2011).

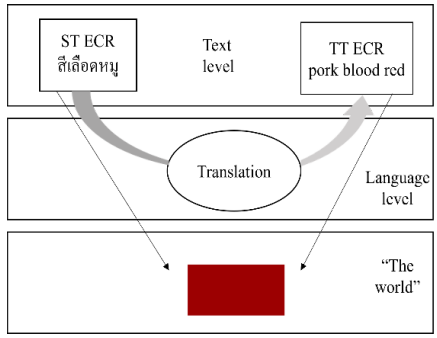

Figure 5 Direct translation

4. **Generalization** is a strategy that makes the TT rendering less specific than the ST ECR. This can be achieved by using a superordinate term or a paraphrase (Pedersen, 2011).

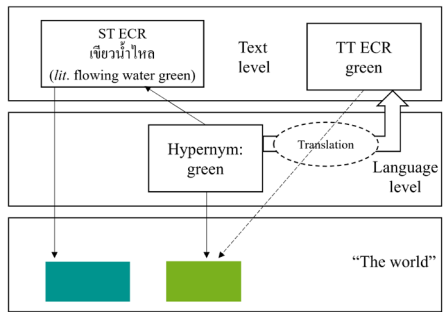

Figure 6 Generalization

5. **Substitution** is a strategy where the ST ECR is replaced with another ECR, either from the source culture (hereafter SC) or the TC. Alternatively, the ECR may be replaced by something entirely different. This approach involves replacing the original cultural reference with one that is either more familiar or more relevant to the audience (Pedersen, 2011).

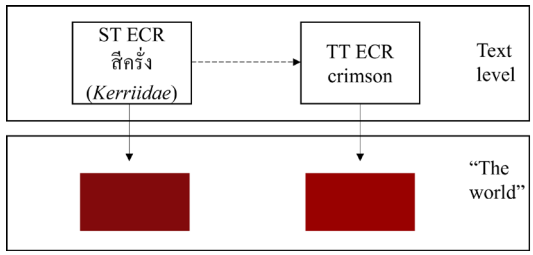

Figure 7 Substitution

6. **Omission** is a strategy where the ST ECR is not included in the TT at all (Pedersen, 2011). Here, Pedersen references Toury's (1995) assertion that Omission is a valid translation strategy, and is arguably more commonly used in subtitling than other types of translation, largely due to the constraints inherent to the medium.

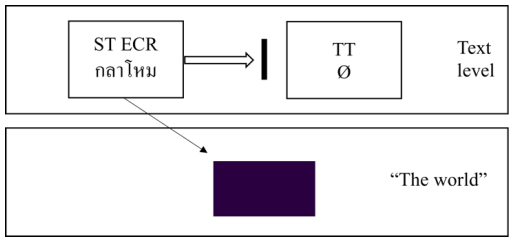

Figure 8 Omission

7. **Official Equivalent**, with no diagram illustrated in Pedersen's (2011) explanation, refers to a situation where a SC ECR has an established or recognized translation in the TL, either through common usage or an official administrative decision (Pedersen, 2011). For example, the term "scarlet" in English is translated into Thai as "*สีแดงเลือดนก*" (bird blood red) (Office of the Royal Society, 2007).

RESEARCH METHODOLOGY

This study aimed to investigate how the translator dealt with translating Thai color terms into English subtitles in the Thai drama *Good Heavens! I'm a Goose Not a Swan* and the extent to which the translation is constrained by spatial and temporal requirements.

1. Materials

The data were collected from two sources. First, 23 episodes available on the official Netflix platform were viewed. However, only episodes 3 and 4, each lasting one hour and set in scenes where characters are situated in a fabric shop, were deemed suitable for the study. In these scenes, the main character sells fabrics in various traditional colors and performs a rap to attract customers' attention. Second, due to Digital Rights Management (DRM), video content from Netflix cannot be captured and copied, another publicly available two-minute highlight from the fourth episode on YouTube was also utilized for the study.

2. Data analysis

This study adopted a mixed-method approach. To address the first research question, both qualitative and quantitative methods were employed. In this step, textual analysis was conducted by recording the intralingual Thai subtitles on Netflix that contained color terms and comparing them to their English counterparts. The translation strategies were categorized based on Pedersen's (2011) taxonomy for rendering ECRs in subtitles. The frequency of each strategy was then tallied and converted into percentages before ranking the most commonly used strategies.

To address the second research question, a quantitative methodology was employed. Initially, spatial elements were measured from Netflix subtitles as part of the temporal dimension analysis. This involved measuring character counts in the ST, including spaces and excluding composite characters such as tone marks and top or bottom vowels, and in the TT, which included spaces and punctuation. Line counts were also recorded to complement the analysis. Subsequently, a publicly accessible two-minute highlight from the fourth episode on YouTube was uploaded to the video editing tool CapCut. This tool was utilized to analyze the temporal dimension of Thai and English subtitles that featured the translation of color terms from Netflix. The analysis involved extracting timecodes in the HH:MM:SS:FF format (hours, minutes, seconds, and frames) and calculating the duration in frames at a frame rate of 30 fps (frames per second). These measurements covered the interval between the start (time-in) and end (time-out) of each subtitle within the footage. The data on spatial and temporal dimensions were then applied to calculate CPS, using a formula developed from the technical guidelines of Díaz-Cintas and Remael (2021) and the style guide of Netflix (2025a).

$$CPS = \frac{Number\ of\ Characters}{Seconds + \frac{Frames}{FPS}}$$

Figure 9 Formula for calculating CPS

Based on the formula, frames were first converted into total seconds, which were then used to divide the total number of characters to determine CPS. The CPS allowed for an assessment of the extent to which the translation adhered to spatial and temporal dimensions.

FINDINGS AND DISCUSSION

1. Identified translation strategies for rendering ECRs

The textual analysis of the two episodes revealed that the color terms used in the drama to describe fabrics are primarily “Thai tones” and non-BCTs. Therefore, it is not possible to use universal BCTs to draw a direct comparison. The study identified 25 color terms, five of which appeared twice. As such, the frequency of any color translated using the same strategy is counted as one, while any color translated using different strategies is counted twice (see Appendix). This approach resulted in the frequency of strategies totaling 26. The various strategies employed are detailed below, categorized according to Pedersen’s (2011) taxonomy, along with their respective frequencies and percentages.

Table 2

Identified translation strategies

No.	Strategies	Frequency	Percentage
1	Generalization	18	69.23
1.1	*Paraphrase*	*15*	*83.33*
1.2	*Hypernym*	*3*	*16.67*
2	Direct Translation	6	23.08
3	Substitution	2	7.69
	Total	**26**	**100**

As can be seen in Table 2, three strategies were identified in the subtitle translation of the selected drama. Generalization is the most common strategy used to translate Thai color terms, primarily through paraphrasing and the use of Hypernyms, followed by Direct Translation and Substitution, respectively. Some detailed examples are provided below to illustrate the findings.

1.1 Generalization

1.1.1 Paraphrase

(1) ST: หงสบาท
TT: reddish yellow

In (1), "*หงสบาท*" (swan's legs) is translated into English as "reddish yellow." Here, the ST ECR is removed, but its meaning and relevant connotations are preserved, as "swan's legs" in the Thai context refer to a mix between red and yellow. As Pedersen explains, this strategy is commonly used to handle ECR crisis points, where the cultural reference is too specific or complex to be effectively translated through Specification or Generalization by a superordinate term (Pedersen, 2011). Simply put, ECR crisis points arise when Direct Translation risks losing essential meaning for the target audience. Additionally, using Direct Translation in this case would be problematic, not least because the audience might struggle to recall the colors of a swan's legs, not to mention the fact that there are numerous swan breeds endemic to different geographical regions. Similarly, Specification attempts to make the reference more precise but may require too much subtitle space or confuse viewers unfamiliar with the culture (Pedersen, 2011). Generalization uses a broader term but can miss the full nuance. Therefore, paraphrasing is used to convey the essence or implied meaning in a way that fits the TC and language (Pedersen, 2011).

(2) ST: ดินแดงเทศ
TT: dark brick red

In (2), the translator paraphrased "*ดินแดงเทศ*" (red foreign soil) as "dark brick red." This paraphrase generalizes the ECR, as the ST ECR reflects the Thai perspective of viewing red soil as foreign. Historically, this term referred to dark red soil from India and Persia (Patchana, 2010). When translated for foreign audiences, the concept of the soil being foreign loses relevance from their perspective and, thus, makes the term easier for them to understand.

1.1.2 Hypernym

(3) ST: ลูกหว้า
TT: blue color

Example (3) illustrates the specific purple color of "*ลูกหว้า*" (Java plum). In this case, the hypernym "blue" used to address the ECR not only renders the ST less specific but also introduces a mistranslation, as "*ลูกหว้า*" is by no means blue. This mistake might be due to the translator's negligence or a distraction caused by the scene where the lead actress is bundling pieces of fabric.

(4) ST: เม็ดมะม่วงปราง
TT: violet

Example (4) illustrates how the ST "*เม็ดมะม่วงปราง*" (mango plum seed) is generalized to the hypernym "violet." While this translation may not fully capture the nuanced pinkish-purple hue of the original term, it still conveys the essence of the purple shade associated with the mango plum seed.

1.2 Direct translation

(5) ST: แดงสด
TT: bright red

In (5), the ST is directly translated into the TT by preserving the semantic load of the ST ECR without any additions or omissions. It is noticeable here that Direct Translation is at play in cases where the ST is formed by modifying the BCT "red" with the adjective "bright," equivalent to "*สด*" (bright) in the TT. This strategy is relatively straightforward compared to the previously discussed culturally specific and complex color terms. Unlike those, this color does not carry culturally specific connotations. Instead, as Phornthipphayaphanit (2014) notes, it is simply one of the ten sources for naming colors during the Rattanakosin period, a practice also found in English.

(6) ST: เปลือกข้าวโพด
TT: corn husk

(6) illustrates the translation of the color "*เปลือกข้าวโพด*" (corn husk) into English as "corn husk." This strategy involves Direct Translation, which, as Pedersen (2011) notes, does not require additional effort to transfer connotations or provide guidance for the target audience. This is viable since corn husk is familiar and widely recognized across cultures, allowing the translated term to resonate naturally with viewers. The use of Direct Translation in this case highlights how shared cultural or environmental references can mitigate the challenges of translating ECRs.

1.3 Substitution

(7) ST: นิลุบล
TT: Cape water lily

The term "*นิลุบล"* (water lily) is derived from Sanskrit and refers to *Nymphaea nouchali*, a species native to southern and eastern Asia. In the TT, it is replaced with "Cape water lily," scientifically known as *Nymphaea capensis*. Pedersen describes this strategy as Cultural Substitution, where the ST ECR is replaced with something different from the TC. More specifically, this substitution involves replacing the original term with a foreign element that is also familiar to the TC—a transcultural ECR from a third culture (Pedersen, 2011). The Cape water lily, for example, is indigenous to Africa, particularly South Africa, but has been cultivated and spread worldwide.

(8) ST: น้ำเงิน
TT: navy blue

As Phornthipphayaphanit (2014) highlights, the color "*น้ำเงิน*" (melted silver) in Thai is considered a BCT, unlike in Berlin and Kay's (1969) color evolution model. The origin of this term lies in its resemblance to the color of liquid silver. When silver is melted into a liquid state, it takes on a light "*คราม*" (indigo) hue. In (8), the translator employed Substitution by replacing the melted silver color with "navy blue," a darker shade of blue that is more recognizable and relatable to the target audience.

Based on the examples above, the findings suggest that Generalization is the most preferred strategy, primarily because paraphrasing helps clarify the specificities of the ST, which might otherwise hinder the viewer's experience by requiring extra effort to understand the meaning, potentially causing distraction or confusion. Somsin's (2024) study, although using Baker's (1992) strategies under different names, confirmed the findings. It was found that paraphrasing was the most frequently used strategy, likely because most characters engage in conversations about general topics that do not require specificity. In support of this, Somsin (2024) cited Anh's (2018) observation that paraphrasing is a crucial strategy, as it helps clarify the meaning of culture-specific terms and prevent confusion. In addition to paraphrasing, the use of hypernyms is also viable as it provides a sense of the ST's meaning without relying on verbatim translation. This parallels Díaz-Cintas and Remael's (2021) assertion that subtitles are rarely verbatim renderings of the spoken text, nor do they need to be. Subtitles interact with the visual and oral elements of the film, making complete translation unnecessary in many cases. However, viewers are still entitled to high-quality translations that address gaps in understanding the SL (Díaz-Cintas & Remael, 2021).

In this study, Direct Translation is the second most-used strategy, which reveals a balance by preserving some of the ST's cultural connotations. As Pedersen explains, this strategy can assist viewers by presenting the ECR in a form that feels more familiar to them (Pedersen, 2011). Notably, the findings suggest that Direct Translation can be at play when BCTs are formed using adjectives like "bright" or the suffix "*-ish*," which are also commonly used in the TL as well as in the SL, or when BCTs are compared to familiar objects across cultures such as ruby, moon, red lead, or corn husk (see *Appendix*).

Additionally, the study also shows that Substitution is the least-used strategy. This suggests that Thai color terms, such as *น้ำหมาก* (spit of betel nut), *เหลืองมะตูมสุก* (ripe bael fruit yellow), and *เขียวดิน* (soil green), are so unique that comparisons to those of the TC might not provide an equivalent representation. This becomes even more problematic when no equivalent exists in the TC, so the translator may opt for a transcultural ECR, as in Example (7). Surrallés (2016) examines how different cultures perceive and describe colors. His findings challenge the universalist perspective, championed by Berlin and Kay (1969), which argues that all cultures share basic color terms that evolve predictably. That is, relativists counter that color perception and terminology vary greatly across cultures, shaped by environmental and linguistic factors. This relativist view highlights cultural uniqueness and disputes the universalist idea of imposing a Western framework on non-Western color perception. This debate further illustrates that

substituting the ST ECR with equivalent terms in the TT ECR is not always feasible, as cultural and linguistic nuances often resist direct translation or universal categorization.

2. Spatial and temporal dimensions

Table 3

Spatial and temporal dimensions

Timecodes	ST and TT	Space and time		
		Liner	Character	Duration
00:00:34:09 00:00:36:13	ห่ม**มอคราม** With a **sky-blue** shawl	1 1	8 21	2:04
00:00:36:20 00:00:39:23	วันอังคารนุ่ง**สีน้ำหมาก** ห่ม**โศก** หรือสลับกัน On Tuesdays, go for **red-brown** Or **yellow-green**, alternate for variety	1 1 2	31 30 38	3:03
00:00:42:26 00:00:46:06	นุ่ง**เขียวดิน** ห่ม**จำปา** A **sandy-green** panung And a **dark-yellow** shawl	1 1 2	15 20 23	3:10
00:00:46:14 00:00:50:21	วันพฤหัสฯ นุ่ง**เสน** ห่ม**ตองอ่อน** สบายตา On Thursday, choose a **red-lead** panung A **light green** shawl, soothing to the eye	1 1 2	29 37 40	4:07
00:00:51:20 00:00:53:27	วันศุกร์นุ่ง**เมฆคราม** ห่ม**จันทร์** On Fridays, go with a **blue-cloud** panung And a **bright-yellow** shawl	1 1 2	21 39 25	2:07
00:00:56:24 00:00:58:29	วันเสาร์นุ่ง**เม็ดมะม่วงปราง** ห่ม**โศก** Saturdays, a **violet** panung A **yellow-green** shawl	1 1 2	26 26 22	2:05
00:01:04:05 00:01:06:12	ต้องนุ่ง**ก้ามปู** ห่ม**ดินแดงเทศ** Wear a **rain tree green** panung A **dark brick red** shawl	1 1 2	19 30 24	2:07

Table 3 indicates that English subtitles are often longer than the Thai ST due to their spacing and grammatical structure. For example, in Thai, "*นุ่ง*" and "*ห่ม*" refer to "wear lower cloth" and "drape or cover," respectively, and can be followed by color terms, as in "*นุ่งเมฆคราม*" (wear dark cloud blue) and "*ห่มจำปา*" (cover champak (yellow)). In contrast, "wear" in English has a broader meaning and can include the two senses in Thai, encompassing both senses and allowing the use of color terms, as in "*I wear blue*," but not "*I cover blue*." These linguistic differences led the translator to add either the loanword "*panung*" (shawl) to the translation as well as split the subtitles into two lines so as to be in line with Netflix's (2025a) style guide, which allows a single line to contain up to 42 characters. Remarkably, none of the lines exceed 42 characters, and this demonstrates strict adherence to the style guide.

Furthermore, this adherence may help explain the absence of strategies such as Retention and Specification in the subtitles. Retention preserves the ST ECR with minimal changes, while Specification adds detail to make it more specific. Both strategies can result in lengthy translations, which are impractical for subtitles due to spatial limitations. Additionally, the English use of word spacing and grammatical structures tends to lengthen text and thus discourages these approaches in favor of more concise solutions. In addition to these strategies, Omission, a common strategy in subtitling, may not be effective for translating color terms.

Removing such terms could lead to a mismatch between the subtitles and the visuals, especially when a character is pointing to or referencing a specific object or detail on the screen. Lastly, Official Equivalent is absent in English subtitles, likely due to the linguistic hegemony of English, whereas Thai occasionally establishes or recognizes translation from English. This reflects the asymmetry in linguistic influence.

Table 4

CPS values

Subtitle	Character	Duration (seconds: frames)	Total seconds	CPS
1	21	2:04	2.13	≈ 9.86
2	68	3:03	3.1	≈ 21.94
3	53	3.10	3.33	≈ 15.92
4	77	4:07	4.23	≈ 18.20
5	64	2:07	2.7	≈ 23.70
6	48	2:05	2.17	≈ 22.12
7	54	2:07	2.7	20

Table 4 shows CPS used for measuring the number of characters that appear in subtitles per second. With the industry norm of 17 CPS in mind, it is found that the CPS of the selected subtitles translated using Pedersen's (2011) strategies mostly exceeds the norm. Some subtitles have CPS values as high as 23.7, while the lowest CPS is 9.86, which is below the norm. This means the subtitle stays on screen longer for fewer characters and can lead viewers to re-read them. Another subtitle has a CPS of 15.92, which gives viewers enough time to read. However, the majority of subtitles are displayed too quickly, making it challenging for viewers to follow the content. This is reinforced by Romero-Fresco's (2015) eye-tracking study, which examined the impact of varying subtitle display rates on viewers' reading experiences. The study revealed that higher subtitle presentation rates reduce the time viewers can dedicate to observing the on-screen visuals. When the results were converted to WPM for comparison with Romero-Fresco's (2015) findings, it was observed that most subtitles exceeded 200 WPM. This high subtitling speed causes viewers to focus more than eighty percent of their time on reading the subtitles, which, as a result, leaves less attention for the on-screen visuals. Additionally, this issue is further exacerbated by the fact that the scene features the lead actress performing a rap, which adds to the difficulty of keeping up with the subtitles.

The results collectively highlight the translator's efforts to navigate the spatial and temporal constraints inherent in subtitling. While the subtitles adhere to the two-line limit through the use of Generalization and sentence separation, they remain too fast for comfortable reading. Although the Generalization strategy is predominantly employed to achieve conciseness, the subtitles still fall short in effectiveness. This underscores the need for subtitling strategies that prioritize brevity. Note, however, that this issue often arises when subtitling software is not used, as it typically manages exceeding CPS automatically and the subtitling speed or so-called reading speed. Therefore, manual translators must not only select strategies that fit within the screen's space but also strive, whenever possible, to maintain synchrony with the accompanying visuals to enhance the viewing experience.

CONCLUSION

This study investigated the application of Pedersen's (2011) newly developed taxonomy for translating ECRs in subtitles by focusing on how Thai color terms are rendered in English subtitles. It also examined whether these translations aligned with the industry standard spatial and temporal requirements of subtitling. The findings indicate that Pedersen's (2011) framework comprehensively categorized the translation strategies used for Thai color terms. Three main strategies were identified, including Generalization, Direct Translation, and Substitution. Among these, Generalization was used most frequently, primarily to enhance clarity and conciseness. Within the Generalization strategy, the translator employed paraphrasing to convey the nuanced meanings of the ST by reducing the viewer's cognitive effort. Hypernyms were also used to capture the overall meaning without relying on verbatim translation.

The study further found that although spatial limitations were addressed through strategies like Generalization and the use of two-line subtitles, the resulting CPS rates were still too high for comfortable reading. This calls for the need for subtitling strategies that emphasize brevity and timing. Translators, especially those working without the support of subtitling software, must balance spatial constraints with temporal readability while ensuring subtitles remain synchronized with the visual content.

LIMITATIONS

This study was subject to limitations related to data accessibility. Due to DRM restrictions on the Netflix platform, it was not possible to extract or record video content directly for detailed temporal analysis. Although this inaccessibility led the study to rely on a publicly available two-minute teaser from YouTube, such a highlight contains only half of all the instances presented on Netflix. Therefore, it only enables a partial analysis of the temporal dimension as a proof-of-concept case study. Future research with fuller access to materials could further illuminate strategies for subtitle translation within spatial and temporal constraints.

RECOMMENDATIONS

Future research should analyze a wider range of episodes or series to capture more diverse uses of color terms and validate the effectiveness of Pedersen's (2011) taxonomy. Collaborating with professionals or gaining access to subtitling software would also allow for more precise temporal analysis, overcoming current DRM limitations. Additionally, research into audience reception of different strategies could further enhance subtitle quality and viewer engagement.

ACKNOWLEDGEMENT

The author would like to thank the Department of Foreign Languages, the Faculty of Liberal Arts, Prince of Songkla University, for assigning the author the task of teaching a translation

and localization course, which inspired the contribution of this article. The author would also like to give special thanks to Mr. Stephan Cannon for proofreading the manuscript.

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Appendix
Identified strategies for rendering Thai color terms in the English subtitles

1. Generalization

1.1 Paraphrase

No.	ST	Literal translation	TT
1	เหลืองมะตูมสุก	ripe bael fruit yellow	shining yellow
2	หงสบาท	swan's legs	reddish yellow
3	นวลจันทร์	whitish moon	yellow tone
4	เหลืองนิล	dark yellow	yellow tone
5	เลื่อมประภัสสร	glossy crystal-like	deep yellow
6	นวล	yellowish white	light yellow
7	มอคราม	dark blue	sky blue
8	น้ำหมาก (x2)	spit of betel nut	red-brown
9	โศก (x2)	Ashoka tree	yellow-green
10	จำปา	champak	dark-yellow
11	ตองอ่อน	young banana leaf	light green
12	เมฆคราม	dark cloud blue	blue-cloud
13	จันทร์	moon	bright-yellow
14	ดินแดงเทศ	red foreign soil	dark brick red
15	เขียวดิน (x2)	soil green	sandy-green

1.2 Hypernym

No.	ST	Literal translation	TT
1	ลูกหว้า	Java plum	blue color
2	คราม	dark blue (*Indigofera tinctoria*)	blue color
3	เม็ดมะม่วงปราง	plum mango seed	violet

2. Direct translation

No.	ST	TT
1	แดงสด	bright red
2	เสน (x2)	red lead/red-lead
3	แดงมณี	ruby red
4	เปลือกข้าวโพด	corn husk
5	จันทร์	moon yellow
6	ก้ามปู	rain tree green

3. Substitution

No.	ST	Literal translation	TT
1	นิลุบล	water lily (*Nymphaea nouchali*)	Cape water lily (*Nymphaea capensis*)
2	น้ำเงิน	melted silver	navy blue