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ARTICLE

Examining the Quality of Machine Translation Subtitling for Saudi Series: Tash Ma Tash a Model

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ABSTRACT

This study examines the quality of machine-translated subtitles for the Saudi comedy series *Tash Ma Tash* using YouTube-generated subtitles. The research focuses on assessing how well machine translation (MT) tools convey the meaning of the source text, with a particular emphasis on the challenges posed by idiomatic expressions, dialectal vocabulary, and humor in Arabic to English translation. A thematic analysis was conducted to examine the application of Pedersen's FAR model, focusing on its three main dimensions: Functional Equivalence (do the subtitles convey speaker meaning?); Acceptability (do the subtitles sound correct and natural in the target language?); and Readability (can the subtitles be read in a fluent and non-intrusive way?). Particular attention was paid to how machine translation (MT) systems handle culturally and linguistically complex content. The findings indicated that although machine translation is effective in translating straightforward terms, it frequently struggles to convey more profound cultural meanings and subtleties, resulting in considerable mistranslations. This research emphasizes the vital need to comprehend the cultural context during translation processes, as numerous idiomatic expressions and culturally specific references are often either lost or inaccurately represented in machine-generated subtitles. Additionally, the study highlights the importance of human involvement in the subtitling process to improve the accuracy and effectiveness of translations. The implications of this research go beyond the particular instance of Tash Ma Tash, suggesting that similar issues may occur in the translation of other culturally nuanced audiovisual materials and so this study contributes to the effectiveness of the machine translation.

Keywords: Machine Translation; Saudi TV Series; Subtitling Process; YouTube Subtitles

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1. Introduction

With the rise of digital streaming platforms, audiovisual content has become increasingly accessible to global audiences. In parallel, advancements in the translation industry, particularly in machine translation (MT), have led to its growing use in automating the subtitling process [1]. However, concerns persist regarding MT's ability to preserve translation quality, particularly when it comes to handling linguistic nuances, idiomatic expressions, and cultural references [2]. These concerns underscore the need to critically assess the effectiveness of machine-translated subtitles, especially for culturally rich content such as Saudi television series.

As Saudi Vision 2030 seeks to position the Kingdom as a global filmmaking hub at the heart of the Middle East, the Saudi film industry is working to reach international markets [3]. Achieving this goal requires significant development in capabilities, technologies, and infrastructure, with audiovisual translation (AVT) being a vital component. These elements, as highlighted by Alharthi and Almehmadi [4], often require careful translation to ensure meaning is conveyed accurately to non-Arabic-speaking audiences. However, machine translation systems often face challenges with dialectical variations and culturally specific humor, which can lead to mistranslations, loss of meaning, or misinterpretations by viewers [5].

Over the past few decades, the subtitling industry has undergone significant changes, particularly in terms of workflow and the expanding market for audiovisual translation [6]. Among these changes, the advent of machine translation has been particularly transformative. Scholars, practitioners, and industry professionals have begun to critically assess the efficiency of machine translation in subtitling, questioning whether it represents a viable solution to the rapid growth of the industry or poses a potential threat to translation quality [7]. Despite its widespread adoption, machine translation in subtitling faces several quality constraints, including technical, cultural, and textual challenges [5].

Saudi television series, particularly those rich in regional dialects and cultural references, pose significant challenges for machine translation subtitling. These challenges stem from dialectal variations, culturally embedded references, proverbs, and humor [8], which differ across Saudi regions and present difficulties for machine translation systems to accurately process [9]. *Tash Ma Tash*, one of the most iconic Saudi comedy series, renowned for its long-running success, social impact, and widespread popularity, exemplifies these complexities. The series is characterized by its satirical content, regional dialects, and culturally specific humor, making it an ideal case study for assessing the effectiveness of machine-translated subtitles.

While machine translation has been extensively utilized in subtitling, its application to Saudi series, such as *Tash Ma Tash*, remains under-explored. This issue is especially pertinent given the current climate, as it exposes weaknesses that need to be addressed, particularly in light of the increasing demand for efficient, cost-effective methods of reaching global audiences. Machine translation offers a potential solution by facilitating faster and less expensive subtitling processes, thereby increasing productivity and market outreach. This research contributes to the subtitling quality, which might influence the success or failure of Saudi media content in international markets.

This study will rely on YouTube as a globally accessible and widely used platform, to assess the quality of machine translation subtitles for *Tash Ma Tash*. As one of the most prominent video-sharing platforms, YouTube provides a vast repository of audiovisual content with automatically generated and user-contributed subtitles, making it a relevant medium for analyzing the effectiveness of machine translation in real-world applications. Additionally, the platform's accessibility allows for a broader audience to engage with Saudi media, further emphasizing the significance of accurate and high-quality subtitles.

This research aims to examine the quality of machine-translated subtitles for the Saudi series *Tash Ma Tash*, focusing on how effectively they convey the meaning, tone, and cultural context of the original Arabic dialogue. The study specifically investigates how well machine-generated subtitles handle key linguistic and cultural features, including idiomatic expressions, regional dialects, and humor embedded in the local context. Consequently, the research addresses the following key questions:

1. To what extent do machine-translated subtitles reflect the meaning and tone of Saudi cultural expressions, including idioms and proverbs?

2. How accurately do machine-generated subtitles represent regional vocabulary and dialects?
3. How effectively do machine-generated subtitles capture the humor and satirical elements of the original Arabic dialogue?

The significance of this research lies in its potential to advance both theoretical and practical knowledge in the field of audiovisual translation (AVT), specifically in the context of machine translation subtitling for Saudi media. While machine translation has become increasingly prevalent in subtitling, its application in the context of Saudi series, such as *Tash Ma Tash*, remains under-explored. This study fills a gap in the literature by providing an in-depth analysis of the quality and effectiveness of machine-translated subtitles, contributing to a better understanding of the limitations and challenges of using machine translation for culturally specific content.

From a practical perspective, this research offers valuable insights for industry practitioners, media producers, and translators involved in subtitling and localization. By identifying technical, cultural, and textual issues in machine translation, the findings could inform strategies for improving subtitle quality, ensuring more accurate translations, and enhancing audience reception. The research also supports the growth of the Saudi film and television industry, particularly in light of Vision 2030's goal of establishing Saudi Arabia as a global filmmaking hub. Improved subtitling practices could play a critical role in expanding the reach of Saudi media to international audiences, fostering cross-cultural communication, and enhancing the global visibility of Saudi content.

Literature Review

Machine translation (MT) has significantly influenced the field of subtitling, reshaping workflows and raising concerns among professionals about quality and job security [6]. The rapid advancement of subtitling technology has increased the demand for professionals to adapt to new tools, including specialized software, translation memories, MT, and cloud-based platforms, emphasizing adaptability as a key skill [10]. However, many translators worry about the impact of MT on their remuneration as it continues to alter industry practices [11]. For example, Karakanta et al. discovered that although automation technologies such as MT increased segmentation and synchronization efficiency, 65% of subtitlers still needed a lot of post-editing to fix mistakes in idiomatic expressions and cultural references [12]. In a similar vein, Hagström and Pedersen showed that uncorrected MT subtitles on websites such as Netflix frequently did not match scene changes, which interfered with the immersion of the viewer and highlighted the necessity of human involvement in timing corrections [6].

Despite these technological advancements, the effectiveness of MT in subtitling remains debated. Calvo-Ferrer conducted a comparison between AI-generated subtitles (such as those produced by ChatGPT) and human translations. The findings indicated that although AI demonstrated a similar level of fluency in simple dialogues, it performed 30% worse in audience comprehension assessments specifically regarding humor and sarcasm. This underscores ongoing deficiencies in handling nuanced content [13].

Karakanta et al. [12] highlight that MT and speech translation developments have enhanced automation in subtitling tools by incorporating automatic segmentation, synchronization, and post-editing functionalities. However, their study reveals variability in professional practices—some subtitlers frequently edit MT-generated subtitles, while others rarely or never do, reflecting diverse industry requirements. Similarly, Hagström and Pedersen [6] emphasize that human intervention remains necessary to refine MT output and ensure accurate timing, underscoring that MT alone is not yet sufficient for high-quality subtitle production. These findings suggest that while automation in subtitling is increasing, the role of human editors remains indispensable, particularly for quality assurance.

The quality of MT-generated subtitles varies, particularly in capturing cultural nuances and idiomatic expressions. While Calvo-Ferrer [13] argues that AI-generated subtitles, such as those from ChatGPT, can achieve a level of perceived quality comparable to human subtitles, concerns remain. Public criticism of MT-subtitled content, such as Netflix's Squid Game, highlights the limitations of minimal post-editing, which resulted in inaccurate and misleading translations. Additionally, serious semantic errors in MT subtitles can disrupt comprehension by conveying irrelevant meanings within a scene's context [14]. These findings collectively indicate that while MT has improved in producing fluently structured subtitles, it still struggles with cultural and linguistic nuances, necessitating human over-

sight.

Building on these concerns, Tuominen et al. [15] further highlight both the potential and limitations of automated subtitles in audiovisual translation. Their study indicates that while viewers can grasp the general meaning of a program through machine-generated subtitles, issues related to automated speech recognition, translation accuracy, and subtitle timing introduce a significant cognitive burden. This increased mental effort reduces the usability and overall effectiveness of automated subtitles. Nevertheless, despite these challenges, their findings reveal strong viewer interest in automated subtitling for breaking news and locally relevant content, particularly as a means of improving access to regional culture and entertainment. However, the study emphasizes that substantial quality enhancements are necessary before automated subtitles can be widely adopted as a reliable alternative to human-generated subtitles. In the same context, technical constraints, such as strict space and time limitations, further complicate MT's accuracy [5]. Tian elaborated on these difficulties by demonstrating that linguistic subtleties continue to be a barrier for automation, since 40% of Korean dramas with MT subtitles had mistakes in honorifics and politeness levels [5].

Cultural constraints stem from differences in beliefs, values, and customs between source and target audiences, making it difficult for MT to accurately convey culturally specific expressions. Additionally, textual constraints are largely due to linguistic differences and the segmented nature of subtitles, which disrupt the logical flow of translation. Language-specific differences exist in the quality of MT-generated subtitles, especially when it comes to capturing cultural quirks. According to Zakraoui et al., dialectal variances (such as Egyptian Arabic) resulted in a 25% greater error rate than Modern Standard Arabic [16], even though Neural Machine Translation (NMT) increased fluency in Arabic-English subtitling

These findings align with Tuominen et al., whose survey revealed that while 70% of viewers appreciated MT subtitles for breaking news due to their speed, 60% reported cognitive fatigue from errors in timing and accuracy, particularly in humor-heavy content [15].

Beyond these general challenges, the use of MT in Arabic subtitling introduces additional complexities. Zakraoui et al. [16] provide a comprehensive review of Arabic Machine Translation (AMT), highlighting the rapid advancements in the field, particularly with the rise of Neural Machine Translation (NMT). While various MT systems and tools currently support Arabic-English translation, their quality remains moderate and in need of improvement. The increasing demand for efficient Arabic-English translation technologies has driven researchers to develop new models, corpora, and toolkits aimed at addressing linguistic and technical challenges. One of the primary difficulties in MT stems from Arabic's complex morphology, dialectal variations, and syntactic differences from English. Whereas NMT has demonstrated significant improvements with these issues by offering better fluency and contextual understanding. However, open challenges remain, particularly in handling dialects, idiomatic expressions, and cultural references—all of which are critical in audiovisual translation [17].

Expanding on these Arabic-specific challenges, Al Sawi and Allam [18] examine the limitations of MT in subtitling Arabic movies, particularly in the translation of allusions in Birdman or (The Unexpected Virtue of Ignorance). Their study compares human and AI-generated (ChatGPT) subtitles, revealing that AI struggles with key-phrase (KP) allusions, often relying on literal translation, which fails to convey implicit cultural meanings. In contrast, human translators employ reduction and adaptation strategies to enhance comprehension. While both AI and human translators retained noun-phrase (NP) allusions, the latter provided additional guidance, such as explanatory notes, to improve clarity. Furthermore, AI also introduced neologisms for technology-related allusions, suggesting a possible strategy for Arabic subtitling. Using the FAR (Fluency, Adequacy, Readability) assessment, the study found that AI's KP translations contained significant semantic errors, disrupting readability and comprehension, while human translations maintained consistency—an essential factor in effective subtitling. Pöchhacker, corroborating these concerns, found that 50% of subtitlers said automation had reduced their pay and that their jobs were increasingly moving toward post-editing rather than complete translations [19].

Hybrid approaches may offer a way forward. DÃaz-Cintas watched that collaborative human-AI workflows in fan-generated subtitles made strides exactness by 35%, recommending that MT might serve as a drafting device

instead of a substitution for human skill [20]. However, Lommel and Burchardt cautioned that whereas MT frameworks accomplish tall BLEU scores for exacting interpretations, human evaluators appraised socially adjusted subtitles 40% higher for adequacy, emphasizing the imperative part of social familiarity in AVT [21].

By synthesizing the findings across these studies, a clear pattern emerges: while MT has significantly advanced in subtitling, its effectiveness varies depending on language, content type, and post-editing efforts. Common themes include the necessity of human intervention for ensuring accuracy, the challenge of cultural and idiomatic expressions, and the ongoing development of MT technologies to address linguistic limitations. However, a notable gap in the literature remains in assessing MT's effectiveness across diverse genres and subtitle formats, as well as in its adaptability to different audience preferences. This gap underscores the importance of further research into refining MT models for subtitling, particularly in languages with complex morphologies like Arabic. Understanding these challenges and developments will contribute to shaping the future of audiovisual translation, balancing automation with human expertise for optimal subtitle quality. All studies confirmed that the future of machine translation in translation depends on finding a balance between automation and careful human intervention, especially for material rich in comedy, dialects and cultural specificity.

This study uses a hybrid theoretical framework that combines Pedersen's FAR model with Skopos Theory and Cultural Translation principles in order to thoroughly assess the quality of machine-translated subtitles in the Saudi television series Tash Ma Tash. A methodical and scientifically supported instrument for evaluating subtitle accuracy, linguistic naturalness, and viewer accessibility is Pedersen's FAR model, which consists of Functional Equivalence, Acceptability, and Readability [22]. However, an interpretive lens is also required because Tash Ma Tash is culturally rich and context-specific, often relying on idioms, sarcasm, and local sociocultural references. A functionalist viewpoint is provided by Skopos Theory, which highlights the communicative function of subtitles in guaranteeing that the intended audience understands content in a way that is appropriate for the situation [23]. In addition, theories of cultural translation, especially those pertaining to foreignization and domestication, allow for an examination of the ways in which cultural subtleties are handled during the translation process [24]. Schierl's case study yields an important finding: although viewers acknowledged the ease of automatic subtitling, they nevertheless favored human-edited versions to guarantee correctness and immersion [25].

To conclude, although machine translation has greatly enhanced the efficiency and fluency of subtitle generation, it frequently fails to capture cultural quirks, colloquial idioms, and timing correctness. The majority of research concur that substantial human assistance is still necessary for high-quality subtitling, particularly in genres that involve dialectal variety, humor, or sarcasm. The approach accommodates both quantitative and qualitative aspects of audiovisual translation assessment by integrating these models to provide a thorough assessment of the quantifiable quality of MT subtitles as well as the degree to which they carry culturally ingrained meanings.

2. Methodology

This study adopts a qualitative research design, employing a case study approach to examine the quality of machine-translated subtitles for the Saudi television series *Tash Ma Tash*. The analysis centers on the effectiveness of machine translation in conveying the meaning, tone, and cultural context of the original Arabic dialogue. Given the nature of the research questions and the complexity of the content under investigation, a qualitative approach is best suited to capture the nuances of language, humor, and cultural references embedded in the series.

To gather the data, a purposive sampling strategy was employed to select episodes that are particularly rich in regional dialects, cultural references, and satirical content. A total of three episodes were chosen from different seasons of the series to ensure diversity in linguistic features and thematic focus (see **Appendix A** for full episode details).

These episodes were selected because they represent the linguistic and cultural complexity that challenges machine translation systems, particularly in the context of Arabic dialects and satirical discourse. Each episode contains segments that rely heavily on contextual humor, textual cues, and colloquial patterns characteristic of Saudi culture, making them ideal for assessing translation accuracy and

cultural adaptation. Furthermore, the popularity and critical acclaim of these episodes within the "Tash Ma Tash" series confirm their representativeness of the program's broader thematic and stylistic trends, reinforcing the relevance and generalizability of the findings.

The selection of the only three episodes was based on the availability of automatically generated English subtitles on YouTube and the presence of complex or culturally embedded language, such as idiomatic expressions, proverbs, and humor. The original Arabic audio and the corresponding machine-translated English subtitles were collected and manually transcribed for detailed comparative analysis.

The analysis is grounded in Pedersen's FAR model, which evaluates subtitle quality across three primary dimensions: Functional Equivalence, Acceptability, and Readability. Functional Equivalence refers to the extent to which the subtitles preserve the meaning and communicative intent of the original dialogue. Acceptability concerns the fluency and naturalness of the translated subtitles in the target language, while Readability pertains to the clarity, coherence, and ease of reading of the subtitles, including their segmentation and synchronization with the audio [19]. The FAR evaluation model has been screened and validated by three experts in the field of translation.

Segments from each episode, particularly those containing cultural references, humor, or dialectal variations, were selected for close analysis. Each segment was examined to assess whether the machine-translated subtitles accurately reflected the meaning, tone, and cultural context of the original Arabic dialogue. Translation errors were identified and categorized according to the FAR model's criteria, focusing primarily on deviations in functional meaning and linguistic acceptability. While readability was considered, particular emphasis was placed on the subtitling challenges related to cultural specificity and linguistic nuance.

Through this framework, the study seeks to identify recurring patterns of mistranslation, loss of meaning, and cultural misrepresentation in the subtitles. The findings aim to provide a clearer understanding of the limitations of machine translation in subtitling complex audiovisual content such as *Tash Ma Tash*, and to contribute to ongoing discussions on improving subtitle quality.

3. Results

This section presents the findings of the analysis, organized thematically by the type of subtitling issue, based on the FAR model. The three dimensions—Functional Equivalence, Acceptability, and Readability—are applied to each identified issue to evaluate the quality of machine-translated subtitles from Arabic into English.

3.1. Translation of Idioms and Cultural Expressions

A recurring issue in the dataset is the literal translation of culturally embedded idioms and expressions, which significantly affects functional equivalence. For example, the phrase "سويت سوات الله" was translated as "I did Allah," which is semantically nonsensical in English and misrepresents the original meaning. Similarly, "أشوف الوالدة ما لها حس" was rendered as "I see your mother has no feelings," ignoring the intended meaning in Arabic (i.e., my mother hasn't been seen or heard from recently). In another instance, "وأنا قلت له ما لي شغل فيه" becomes "I have told them that I have work in you," which is both ungrammatical and semantically incorrect. These examples show poor functional equivalence and acceptability.

However, some idiomatic expressions, as shown in **Table 1**, were well-translated. "يا رجال، وسع صدرك" was appropriately translated as "O man, be patient," preserving both tone and meaning. Similarly, "السلام عليكم ورحمة الله" was translated as "Peace and mercy of God be upon you," which, while slightly formal, maintains cultural and religious connotation, showing good functional equivalence, acceptability, and readability.

Table 1. Translation of idioms and cultural expressions.

Arabic Source Text	Machine Translation	Comment	Affected FAR Dimension
سويت سوات الله	I did Allah	Bad - Literal	Functional Equivalence + Acceptability
أشوف الوالدة ما لها حس	I see your mother has no feelings	Bad - Literal	Functional Equivalence + Acceptability

Table 1. *Cont.*

Arabic Source Text	Machine Translation	Comment	Affected FAR Dimension
وأنا قلت له ما لي شغل فيه	I have told them that I have work in you	Bad - Literal and grammatical	Functional Equivalence + Acceptability
يا رجال، وسع صدرك	O man, be patient	Good - Preserved meaning	Functional Equivalence + Acceptability + Readability
السلام عليكم ورحمة الله	Peace and mercy of God be upon you	Good - Culturally appropriate	Functional Equivalence + Acceptability + Readability

3.2. Dialectal and Regional Vocabulary Representation

Several mistranslations arise from the failure to accurately interpret regional dialects and culturally specific vocabulary, significantly affecting the quality and acceptability of the subtitles. For instance, as shown in **Table 2**, the phrase "ما فيها إلا العافية" was mistranslated as "Except for health," stripping away the original's idiomatic positivity, which actually conveys the reassuring meaning of "she's in good health." Similarly, "وصلت خير" was rendered as "I arrived well," failing to capture the accurate meaning and intended sense of safety and relief typically implied by the expression. An even more severe error is seen in the translation of "يا اللحوات الغانمة," a respectful greeting, which was incorrectly and offensively translated as "O spoiled fish." This not only results in complete loss of meaning but also damages the acceptability and functional equivalence of the subtitle. Further mistranslations include "الآجار تراه حال," awkwardly rendered as "The rent, it's condition," and "إذا شفت رقعة وجهك," which became "If I see a patch on your face"—both literal translations that obscure the intended meaning and disrupt viewer comprehension.

Table 2. Dialectal and regional vocabulary misrepresentation.

Arabic Source Text	Machine Translation	Comment	Affected FAR Dimension(s)
ما فيها إلا العافية	Except for health	Bad – Idiomatic positivity lost (means "she's healthy")	Functional Equivalence + Acceptability
وصلت خير	I arrived well	Bad – Assurance of safety not conveyed properly	Functional Equivalence + Acceptability
يا اللحوات الغانمة	O spoiled fish	Bad – Serious misinterpretation; respectful phrase rendered offensively	Functional Equivalence + Acceptability
الآجار تراه حال	The rent, it's condition	Bad – Translation is fragmented and unnatural	Functional Equivalence + Acceptability
إذا شفت رقعة وجهك	If I see a patch on your face	Bad – Literal rendering, loses intended idiomatic nuance	Functional Equivalence + Acceptability
زول	Man	Good – Accurate cultural and contextual translation	Functional Equivalence + Acceptability + Readability
باتسر	Tomorrow	Very Good – Regional dialect recognized accurately	Functional Equivalence + Acceptability + Readability

3.3. Humor and Satirical Content Misinterpretation

The translation of humor and satire in *Tash Ma Tash* frequently suffered due to literal renderings that failed to capture cultural nuances and comedic intent. Several mistranslations significantly altered or erased the humor embedded in the original dialogues. For instance, as shown in **Table 3**, the phrase "من صباح الله وأنا أطامر," which humorously conveys someone running around frantically since early morning, was mistranslated as "Is the lamp of the lord of the world, and I have been running." This version not only introduces nonsensical imagery but also completely loses the comedic tone and naturalness of the original. Similarly, "يا من شرا له من حلاله علة" a proverb humorously criticizes someone who unintentionally brought trouble upon themselves through something they thought would be beneficial, was rendered as "O you who have a spark from his lawful right," resulting in a confusing, ungrammatical translation that severely compromises both functional equivalence and acceptability. Such examples demonstrate a clear failure to preserve the satirical edge and humor that are central to the series' impact.

Table 3. Humor and satirical content misinterpretation.

Arabic Source Text	Machine Translation	Comment	Affected FAR Dimension(s)
من صباح الله وأنا أطامر	Is the lamp of the lord of the world, and I have been running	Bad – Severe mistranslation; humor and original meaning lost	Functional Equivalence + Acceptability
يا من شرا له من حلاله علة	O you who have a spark from his lawful right	Bad – Ungrammatical and semantically confusing	Functional Equivalence + Acceptability
على صيحة وحدة	On one shout	Acceptable – Literal but somewhat conveys the sense of urgency	Acceptability
انفقع راسي من ذا الأخبار	My head is full of this news	Good – Captures intended frustration and emotional tone	Functional Equivalence + Acceptability

4. Discussion

4.1. Translation of Idioms and Cultural Expressions

The difficulty observed in translating culturally embedded idioms and expressions in the machine-translated subtitles closely reflects challenges noted in previous research. Tian [5] emphasizes that cultural constraints often prevent MT systems from accurately conveying meanings across different linguistic and cultural contexts. This is evident in examples like "I did Allah" and "I see your mother has no feelings," where literal translations led to severe misinterpretations and poor functional equivalence. Such misinterpretations not only undermine the intended message but also risk alienating audiences unfamiliar with the original culture. Similarly, Al Sawi and Allam [18] found that AI-generated subtitles struggle with culturally loaded expressions, frequently producing literal renderings that obscure or distort intended meanings. These mistranslations highlight a significant limitation of current MT tools when dealing with Arabic idiomatic and culturally nuanced language.

Despite these issues, a few successful translations—such as "Peace and mercy of God be upon you"—show that MT can occasionally preserve meaning and tone when cultural expressions are relatively straightforward. However, these isolated successes do not diminish the broader pattern of inconsistency. As Hagström and Pedersen [6] point out, human intervention remains necessary to refine machine-generated subtitles, particularly when cultural sensitivity is essential. Overall, these findings reinforce the view that while MT has made notable progress, it is not yet capable of consistently handling the complexities of culturally specific subtitling without human oversight.

4.2. Dialectal and Regional Vocabulary Representation

Mistranslations of regional vocabulary and dialectal expressions were frequent in the dataset, often leading to serious losses in functional equivalence and acceptability. Examples such as the mistranslation of "ما فيها إلا العافية" ("Except for health") and "يا اللحوات الغانمة" ("O spoiled fish") show that machine translation struggles to render culturally nuanced meanings accurately. These findings align with previous research highlighting that Arabic's rich dialectal variation presents substantial challenges for MT systems [16,18].

Nonetheless, there were a few cases where the system effectively handled regional vocabulary. Terms like "زول" (man) and "باتسر" (tomorrow) were correctly translated, showing that machine translation can occasionally succeed with isolated, simpler dialectal terms. However, these instances remain exceptions rather than the norm, as the broader results reveal persistent difficulty with more complex and culturally loaded expressions. These findings reinforce the argument of Hagström and Pedersen [6] that human intervention remains essential for refining MT output and ensuring accurate and culturally appropriate subtitling. Overall, while MT shows potential in handling straightforward cases, it still lacks the reliability needed to consistently represent dialectal and culturally rich content.

There were a few instances where the machine translation managed to handle dialectal vocabulary successfully. The word "زول," a Sudanese colloquial term meaning "man" or "person," was accurately translated as "Man," demonstrating effective recognition of regional usage. Additionally, the word "باتسر," a regional Saudi variation meaning "tomorrow," was correctly translated as "tomorrow," showing successful dialect interpretation in this instance. These examples highlight that while machine translation

often fails with more nuanced, idiomatic, or context-heavy expressions, it can occasionally capture simple dialectal terms correctly.

4.3. Humor and Satirical Content Misinterpretation

The difficulties observed in translating humor and satire in Tash Ma Tash reflect broader challenges in machine translation highlighted by previous research. The severely distorted translations—such as "Is the lamp of the lord of the world"—echo findings by Llanos Martínez [14], who emphasized that serious semantic errors in MT can disrupt comprehension by delivering irrelevant meanings. Literal renderings that erase the comedic tone align with Tian's [5] observation that MT struggles to convey culturally rooted expressions, especially under textual and cultural constraints. These examples also support Al Sawi and Allam's [18] conclusion that AI often fails with key-phrase allusions, relying on ineffective literal strategies that undermine readability and functional equivalence. Thus, the humor misinterpretations here underline the significant gaps that still exist between machine-generated translations and the cultural fluency required for effective subtitle production.

However, some instances showed partial success where machine translation managed to preserve the general tone, albeit awkwardly. Phrases like "On one shout" and "My head is full of this news" indicate that while the translations lacked idiomatic naturalness, they conveyed elements of urgency and frustration, partially meeting the expectations of functional equivalence. This limited success resonates with Tuominen et al. [15], who found that viewers could grasp the general sense of machine-translated content despite inaccuracies. Not all attempts at translating humor were entirely unsuccessful. Some translations partially retained the intended comedic effect despite linguistic awkwardness. The phrase "على صيحة وحدة" was translated as "On one shout," which, although not idiomatic in English, hints at the suddenness and chaos suggested by the original.

Likewise, "انفقع راسي من ذا الأخبار" was translated as "My head is full of this news." While the translation loses some of the original's vivid exaggeration—implying one's head exploding from overwhelming news—it still manages to convey the core emotion of frustration. These instances show that although the translations struggled overall with humor and satire, there were occasional partial successes where the general tone or meaning was somewhat preserved.

5. Conclusions

This study investigated the quality of machine-translated English subtitles for the Saudi series *Tash Ma Tash*, focusing on functional equivalence, acceptability, and readability (FAR model). The findings reveal a consistent pattern of errors, especially in the translation of idiomatic expressions, dialectal vocabulary, and humor. Literal translations often led to loss of meaning, unnatural phrasing, and cultural misrepresentation. While there were occasional successes—particularly with simple or familiar phrases—these instances were limited and did not offset the broader issues of inconsistency and inaccuracy. Overall, the analysis underscores the limitations of current MT systems in handling culturally nuanced and linguistically diverse audiovisual content.

A limitation of this study lies in the random selection of episodes from the long-running Saudi TV series *Tash Ma Tash*. While this method was chosen to ensure a practical and unbiased sampling of linguistic features, dialects, and cultural content, it may not fully capture the complete range of the show's linguistic richness or cultural nuance. As a result, the findings might not be entirely generalizable across the entire series. Additionally, using YouTube as the primary platform was based on its global accessibility and the availability of auto-generated English subtitles. However, subtitle quality and availability may vary across platforms, potentially introducing inconsistency in the data and limiting the control over subtitle versions analyzed.

In conclusion, future research could benefit from expanding the sample size to include a broader and more targeted selection of *Tash Ma Tash* episodes, particularly those rich in dialectal variety or cultural references. Comparative studies involving different machine translation engines (e.g., Google Translate, DeepL, ChatGPT) could offer more insight into the variability of output quality. Moreover, incorporating user reception studies—such as viewer surveys or comprehension tests—would provide a more comprehensive understanding of how audiences engage with and interpret machine-generated subtitles. Finally, focusing on

other genres or series from the Arab world would help test the generalizability of these findings and contribute to a more robust evaluation of MT subtitling across diverse cultural and linguistic contexts.

Author Contributions

Conceptualization, R.M.A. and S.M.F.; methodology, S.M.F. and N.A.A.; software, R.M.A.; validation S.M.F. and N.A.A.; formal analysis, R.M.A.; investigation, R.M.A. and S.M.F.; resources, R.M.A.; data curation, R.M.A.; writing—original draft preparation, R.M.A.; writing—review and editing, N.A.A.; visualization, N.A.A.; supervision, S.M.F.; project administration, N.A.A. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest

The authors declare no conflict of interest.

Appendix A

List of Analyzed Episodes from *Tash Ma Tash*

1. **لست مدرسًا** (*I Am Not a Teacher*)
   Season 5, Episode 17
   https://www.youtube.com/watch?v=UpwPtk0C0Eo
2. **حدث في مثل ذلك اليوم** (*It Happened on This Day*)
   Season 11, Episode 10
   https://www.youtube.com/watch?v=hpvFgPy6ypw
3. **حارتنا** (*Our Neighborhood*)
   Season 6, Episode 20
   https://www.youtube.com/watch?v=qotJwlaYilQ

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