

Assessment of Cultural Sensitivity in the ChatGPT's Translation of the Acehnese Chronicle 'Ali Peureudan'

Sabrina^{1*}, Ghazali Takary²

^{1,2,3}English Department, Universitas Serambi Mekkah, Banda Aceh, Indonesia

Article Information

Received: 21-11-2024 Revised: 28-11-2024 Published: 5-12-2024

Keyword

Learning

*Correspondence Email:

sabrina@serambimekkah.ac.id.

Abstract

Cultural sensitivity is an integral aspect in translation to ensure the preservation of context and meanings, allowing the readers to grasp the intended meanings; however, this aspect was often omitted and still highly under-researched. The research aimed to examine cultural sensitivity in the ChatGPT's English translation ChatGPT; Perplexity AI; English Language of the Acehnese Chronicle of Ali Peureudan originated from Aceh Province, Indonesia. The story contains culturally-specific phrases in Acehnese and Arabic languages. The research was a Comparative Literary Analysis which is descriptive qualitative in nature. The source text (ST) and Target Text (TT) generated by ChatGPT were compared and analyzed carefully using the Translation Quality Assessment developed by Juliane House (2015). There were 26 cultural phrases in total under analysis. The results revealed that 85% of ChatGPT's renditions of culturally-bound terms were covert, which means that the phrases were adapted to the target language norms (English), such as Allah as 'God', Insya Allah as 'God willing', and 'Surat' as 'Wish', causing a loss of cultural nuance, generalization, semantic narrowing, and meaning distortions. Only 15% of the analyzed phrases were translated overly by maintaining their original versions, avoiding diminution of cultural meanings. Of the 15%, only a single word was found to be kept intact in its original version yet accompanied by a meaning description, namely the word *Alhamdulillah* (Praise be to God). Such strategy protects its originality, avoids erasure of cultural details, as well as provides understanding to the target readers of its intended meaning. This research concludes that ChatGPT still lacks cultural sensitivity in rendering a literary work. This research is expected to be a foundation for those using ChatGPT as a translation tool for such culturally sensitive texts, and provide an input to ChatGPT developers to improve its system for more accurate rendition.

1. Introduction

In recent years, the rise of artificial intelligence (AI) tools has made significant strides in fields like natural language processing and machine translation. One such tool, ChatGPT, has been increasingly used to assist in translation tasks across various languages. While ChatGPT's capabilities are vast, translating complex and culturally rich texts remains a challenging task, particularly when it comes to languages and cultures that require deep contextual understanding. The translation of culturally significant texts, such as the Acehnese Chronicle of Ali Peureudan (Hikayat Ali Peureudan), offers a unique opportunity to examine the limitations and strengths of AI-based translation tools in addressing the nuances of language and culture.

Acehnese, a language spoken in the Aceh region of Indonesia, is not only a means of communication but also a vessel for cultural expression, religious beliefs, and historical narratives. The Chronicles of *Ali Peureudan* is a classic Acehnese text that blends history, legend, and religious significance, recounting the life and deeds of Ali Peureudan, a revered figure in Acehnese culture. The text, like many other traditional chronicles, is interwoven with local customs, religious values, and a worldview that may not have direct equivalents in other languages. As such, translating such a text requires more than just a literal conversion of words—it demands an understanding of the cultural context, symbolism, and societal values embedded in the narrative (Katan, 2019).

This paper seeks to explore the effectiveness of ChatGPT in translating the The Chronicles of *Ali Peureudan* from Acehnese to English, focusing specifically on its cultural sensitivity. Cultural sensitivity in translation refers to the Al's ability to capture not just the literal meaning of words but also the socio-cultural and emotional nuances that define the text's true meaning (Liu, 2021). Al translation systems, while impressive in their ability to process large amounts of data and recognize linguistic patterns, often struggle to account for the subtleties of culture, religion, and tradition that shape a text's meaning (Suryani, 2018). In the case of Acehnese chronicles, these subtleties can include specific religious references, local idioms, and cultural symbols that Al systems may either misinterpret or fail to translate with the same depth.

The importance of cultural sensitivity in translation has been well-documented in translation theory. For instance, Liu (2021) discusses the necessity of cultural awareness in AI translation systems, noting that while algorithms can learn language patterns, they often fail to grasp the cultural context that is integral to many texts. Similarly, Katan (2019) emphasizes that translation is not merely a technical process but a communicative act that requires an understanding of the cultural and social context behind the words. These challenges become particularly evident when translating literature or historical texts that are deeply tied to the identity and heritage of a specific community. In the case of Acehnese culture, this includes religious references to Islam, local traditions, and the historical significance of figures like *Ali Peureudan*, which may not be fully understood or represented by AI systems. However, so far, there is no research investigating this particular aspect. Thus, this research will evaluate ChatGPT's translation of the The Chronicles of *Ali Peureudan* to determine how well it handles culturally sensitive content. Specifically, the research will focus on whether the translation retains the depth of cultural meaning, accurately reflects religious and historical references, and avoids misrepresentations of Acehnese identity. Through this examination, the paper will contribute to broader discussions about the challenges and potential of AI in culturally sensitive translation, particularly for languages and texts that hold significant cultural weight.

1.1 Literature Review

1.1.1 The Chronicle of Ali Peureudan

Chronicles or Folklore are inseparable from the life of Acehnese people. Acehnese people refer to the native people of Aceh, a province situated in the westernmost part of Indonesia. Aceh is known as "Serambi Mekkah" ("Veranda of Mecca" in English), reflecting how much it is influenced by Islam. It was once the first gateway of Islam to Southeast Asia and the center of Islamic learning in the region. Islamic values penetrate nearly all aspects of Acehnese people. The Arabic language is even adopted to books, folklore, chronicles, and daily communication. Folklore and chronicles, in particular, serve as a means of teaching history, Islamic principles, and morals to the young generation. Suryani (2018) highlights the role of Acehnese folklore in preserving identity and tradition, noting that such texts are rich with local customs, religious values, and historical references that are integral to the Acehnese community. The folklore and chronicles typically contain many culturally-specific phrases that need careful consideration when translated.

The Chronicle of *Ali Peureudan* is one of many Acehnese chronicles. It tells a story about the life and deeds of *Ali Peureudan*, a legendary figure in Acehnese history, known for his bravery, wisdom, and devotion to Islam. The story is deeply interwoven with Acehnese identity, highlighting key themes such as resistance, leadership, and the preservation of cultural and religious values.

The narrative begins with *Ali Peureudan*'s noble birth and his early encounters with spiritual and worldly challenges. As a man of great faith and integrity, Ali becomes a symbol of justice and righteousness. His journey is marked by his dedication to spreading Islam in Aceh, as well as his role in fighting against foreign invaders and oppressive rulers. His efforts in protecting his people and their way of life are central to the chronicle, which positions him as both a religious and a cultural hero.

In addition to Ali's heroism, the chronicle also emphasizes the importance of community, family, and religiosity. Through his actions, the chronicle explores moral lessons about the virtues of leadership, sacrifice, and loyalty to one's faith and people. The text also highlights the significance of Acehnese customs, including the role of elders, hospitality, and communal responsibility.

Throughout the story, the supernatural and the divine are woven into the fabric of the narrative. Ali's victories and wisdom are often depicted as being aided by divine intervention, underscoring the belief in the power of faith. The chronicle serves not only as a historical recount but also as a moral guide, reinforcing the values that have shaped Acehnese society.

The Chronicles of *Ali Peureudan* holds a vital place in Acehnese culture, serving as a means of passing down oral traditions, religious teachings, and cultural values from one generation to the next. Its historical and cultural significance makes it an important text for understanding the heritage of Aceh and its people. The chronicle is celebrated for its richness in local traditions, Islamic spirituality, and historical context, making it a unique contribution to the literature of Southeast Asia.

1.1.2 Cultural Sensitivity in Translation

Cultural sensitivity in translation refers to the ability of translators—whether human or AI-based machine translations—to not only capture the meaning of the words but also the deeper cultural, social, and emotional undertones of the source text. According to Katan (2019), translation is an inherently intercultural act, as it involves transferring meaning from one cultural context to another. He argues that effective translation is dependent on a nuanced understanding of both the language and the culture from which it originates. Similarly, Liu (2021) discusses the importance of cultural awareness in AI translation systems, stating that although AI tools can process language data efficiently, they often lack the capacity to understand the cultural contexts that inform meaning. AI, while proficient in linguistic translation, often struggles with subtleties such as idiomatic expressions, cultural references, and values specific to a particular group or community.

1.1.3 Challenges of AI in Culturally Sensitive Translation

Despite the advancements in AI-driven translation tools, significant challenges remain in the translation of texts that require cultural sensitivity. AI systems, including ChatGPT, operate based on vast datasets and algorithms that are primarily driven by statistical patterns and language models, rather than an understanding of culture. Schäffner (2018) argues that AI's reliance on these models makes it difficult for systems to interpret the emotional and cultural resonance of certain words or phrases. In cases of culturally significant texts, AI systems may either misinterpret terms or fail to capture the intended tone and cultural meaning. For example, an AI system might translate a culturally loaded term like "syura" (a term often associated with consultation or gathering in Islamic practice) without recognizing its specific religious and social importance in Acehnese culture.

Additionally, Barzilay and Elhadad (2019) suggest that AI translation systems often fail to handle polysemy—words that have multiple meanings based on context—which is common in culturally rich languages like Acehnese. The challenge becomes particularly evident in texts like The Chronicles of Ali Peureudan, where the same term might carry different meanings based on religious, historical, or cultural contexts. In such cases, AI models may prioritize literal meanings over context-specific interpretations, leading to incomplete or inaccurate translations.

1.1.4 Cultural Representation and Ethics in AI Translation

A key concern in the use of AI in translation is the ethical implications of cultural representation. Baker (2018) explores the ethical challenges of AI in translation, emphasizing that translation is not a neutral process but one that can either reinforce or undermine cultural stereotypes. In the case of Acehnese texts, there is the potential for AI translation tools to oversimplify or distort cultural concepts, either by stripping away the layers of meaning or by projecting external cultural biases onto the translation. For example, AI's inability to understand the full scope of religious significance in texts could result in the misrepresentation of Islamic concepts or the Acehnese worldview, leading to a loss of authenticity and cultural integrity.

1.1.5 Translation Quality Assessment

There are a number of frameworks created by scholars in the field to evaluate the quality of a translation. One of which is the framework developed by Juliane House (2015) who divides translation into two categories: Overt Translation and Covert Translation. Overt translation refers to a translation strategy that retains source culture explicitly to keep its originality and cultural nuance, while Covert Translation adapts the translation to the target culture norms for target audience comprehension, for instance, by generalizing a cultural term into something more familiar to the target readers.

2. Research Methods

The research is a Comparative Literary Analysis which is descriptive qualitative in nature. According to Spivak (1999), Comparative Literary Analysis explores the intricacies of how cultural expressions are adapted, ensuring a nuanced understanding of how language shapes meaning. This approach involves a direct comparison between the original and translated versions of the chronicle. The original story of the chronicle was obtained from a website www.tengkupueh.com. The chronicle was originally long (±200 pages); however, due to a limited nature of the research, only two pages were taken as sample and translated using ChatGPT for scrutiny. The chronicle contains culturally-bound phrases in Acehnese and Arabic language, and their English translations would then be analyzed in terms of cultural sensitivity. The translations will then be assessed and grouped based on Juliane House's Translation Quality Assessment (TQA) (2015) described earlier in the Literature Review section (See 1.1.5).

3. Results and Discussion

The Translation of the *Ali Peureudan Chronicle* generated by ChatGPT is presented in the following table:

Table 1. Source Text of Ali Peureudan and Target Text by ChatGPT.

Line	Source Text (ST) (in Acehnese Language)	Target Text (TT) by ChatGPT (in English)
1	Ali Peureudan nama meusyeuhu	Ali Peureudan, the name of the storyteller.
2	Nama hikayat sinoe Ion bayan	The tale of Sinoe Ion Bayan
3	Nama isteri putroe analan	The name of the wife, Putroe Analan.
4	Pociit Arian judo tuanku	Pociit Arian, the title of the ruler.

5	Bismillahirrahmanirrahim	In the name of Allah, the Most Gracious, the Most Merciful.	
6	Bismillahi phon mulaan	In the name of Allah, we begin.	
7	Nama Tuhan zat nyang Esa	The name of God, the One and Only.	
8	Nama isem nyang beusaren	The name of the Almighty.	
9	Wajeb tuan bak phon mula	It is obligatory to begin with Him.	
10	Nyang keudua alhamdulillah	And we say, Alhamdulillah (Praise be to God).	
11	Pujoe Allah Rabon ' Ala	Praise be to Allah, the Lord of the Worlds.	
12	Bandum pujoe meuwoe keu Allah	All praise belongs to God .	
13	Nyang peurintah alam donya	He is the one who governs the world.	
14	Lahe baten saket mangat	The heavens, the earth, the sea, and the land.	
15	Dum buet kudrat Allah Ta'ala	It is through the power of Allah Ta'ala.	
16	Langet bumoe laot darat	The sky, earth, sea, and land	
17	Bandum leungkap neukaronya	Everything is complete in its harmony	
18	Lheueh lon pujoe sidroe Tuhan	Praise be to the One, God,	
19	Seulaweuet lheueh nyan keu Saidna	May all blessings reach Saidna	
20	Pujoe pi lheueh seulaweuet sajan	Praise be upon us for our prayer ,	
21	Lon leueung tangan jaroe dua	We offer our hands with sincerity.	
22	Lon lakee bak Tuhan sidroe	We ask for blessings from the Almighty	
23	Beusampoe barang lon cinta	With everything I do, I love.	
24	Nyang lon surat beusuleusoe	From my heart, I wish the best,	
25	Tuhan sidroe tulong hamba	May the Almighty guide us.	
26	Harah lapan beuek teupat	May peace be upon us.	
27	Beumangat watee geubaca	May love surround us, forevermore	
28	Bek tacarot ngon taupat	Do not despair or lose hope,	
29	Hai sahbat bukon lon saja	O friend, it is not just me.	
30	Kareuna lon goh lom cakap	For I am still learning,	
31	Goh lom 'ajab bak meurika	Still amazed at those in power.	
32	Ulon baro lon seumurat	I am only human,	
33	Patot silap Iheueng-lheueng banja	Prone to mistakes and missteps.	
34	Nyangkeu lon kheun bek taupat	That's why I say, don't give up,	
35	Lon seumurat goh biasa	For I am just like everyone else.	
36	Bitpi meunan nyak meutuah	Even with this, I strive,	

37	Insya Allah lon usaha	God willing, I will continue to try.
38	Meuna tulong nibak Allah	With God's help,
39	Cit pantah bak lon meurika	I will not falter before them

From Table 1, we can see that the Chronicles of *Ali Peureudan* contain a high number of culturally-bound phrases (in bold, left column) in Acehnese and Arabic language, followed by their equivalences proposed by ChatGPT (in bold, right column). As explained earlier, the Arabic phrases were used by Acehnese people mainly due to the fact that they are mostly Islamic believers. The children in Aceh were even taught the Arabic language to be able to recite Al-Qur'an. Consequently, they grow up understanding Arabic in addition to their mother tongue, Acehnese. The Arabic phrases are also widely used in folklore and chronicles like the one being investigated in the current research. There are 28 cultural phrases in total whose translations can be categorized as follows, based on framework of Juliane House (2015):

Table 2. Translations of Culturally-Specific Phrases in the Chronicles of Ali Peureudan by ChatGPT Based on the Translation of Quality Assessment (Juliane House, 2015).

No.	Source Text (ST)	Back Translation of ST	Target Text (TT) by ChatGPT	Translation Strategy Adopted by ChatGPT (Based on Juliane House (2015))
1.	nama meusyeuhu	a famous name	name of the storyteller	Covert
2.	Bismillahirrahmani rrahim	In the name of Allah, the Most Gracious, the Most Merciful.	In the name of Allah, the Most Gracious, the Most Merciful.	Covert
3.	Bismillahi	In the name of God	In the name of God	Covert
4.	bak phon mula	to begin with His Name.	to begin with Him.	Covert
5.	Alhamdulillah	Praise be to Allah	Alhamdulillah (Praise be to God)	Overt
6	Rabon 'Ala	The Most High/Exalted God	the Lord of the Worlds	Covert
7	Allah	God	God	Covert
8	Lahe baten saket mangat	Physically, spiritually, in sickness, in healthy condition	The heavens, the earth, the sea, and the land.	Covert
9	Allah Ta'ala	Allah, The Most High	Allah Ta'ala	Overt
10	Seulaweuet	blessings	blessings	Covert
11	Saidna	Prophet Mohammad's friends	Saidna	Overt
12	seulaweuet	blessings	prayer	Covert

13	Tuhan sidroe	The one and only God	the Almighty	Covert
14	surat	express	wish	Covert
15	Tuhan sidroe tulong hamba	O' The only God, please help me.	May the Almighty guide us.	Covert
16	tacarot	we curse	despair	Covert
17	taupat	we swear	hope	Covert
18	meurika	there	those in power	Covert
19	seumurat	recite Al-Qur'an	human	Covert
20	Iheueng-lheueng banja	missteps	missteps	Covert
21	taupat	we swear	give up	Covert
22	seumurat	recite Al-Qur'an	just like	Covert
23	Bitpi meunan nyak meutuah	Even though it is such a way, 0 my dear	Even with this, I strive,	Covert
24	Insya Allah	God willing	God willing	Covert
25	nibak Allah	from Allah	God's	Overt
26	meurika	there	before them	Covert

From Table 2, we can see that 22 out of 26 translations of cultural phrases (85%) by ChatGPT were categorized as "Covert Translation", in which the culturally-bound phrases were adapted to the target culture norms. The word *Bismillahi* in Line 6, for instance, was translated covertly as "In the name of God". In Arabic, *Bismillah* was recited when a person wants to begin an action (e.g., prayer, eating, sacrificing animals, etc), or ask for Allah's protection from any kinds of danger. It gives some strength for those who recite it as they are certain that Allah is with them (Tahir & Nasir, 2024). In other words, it has some physical and spiritual advantages for a person. Translating the word *Bismillah* literally as "In the name of God" in English may decrease its connotative details and cultural sensitivity that the word brings.

The word *Bismillah* also contains the word *Allah* in it, which was translated as 'God' by ChatGPT. Such translation is also visible for the word *Allah* in Line 8 and 15. The word *Allah* originates from the Arabic language. If translated literally in English, it means 'God'. Even though the translation is accurate, from a semantic point of view, the word 'God' can refer to any God in any religion. The target readers may not grasp the intended meaning of the original word, which is meant to refer to the God specifically worshiped by Muslims. Thus, translating it faithfully to English might reduce its actual contextual meaning. In other words, this ChatGPT's approach may appear culturally insensitive. Furthermore, if the word 'God' stands alone without much context available, misinterpretation is likely to occur as readers may get a false assumption of which God it refers to.

Another example is the word *Insya Allah* in Line 37, which was translated as "God willing". Despite the translation accuracy, it has reduced the cultural sensitivity, further leading to a cultural nuance loss. According to Clift and Helani (2010), the word *Insya Allah* originally derives from Arabic as a religious expression meaning

"If Allah allows it to happen, it will happen". It is commonly used by Arabic speakers to mitigate the risk of violating future commitment. The use of *Insya Allah* has been widespread among Muslims around the world. However, Nazzal (2005 as cited in Pratama, 2017, p. 66) reported that the word *Insya Allah* has undergone generalization, resulting in several pragmatic functions, namely as: "(1) a mitigation device for rejection, (2) to implicitly accept a request, and (3) as a mitigating device for future commitment." For this reason, maintaining the word *Insya Allah* in its original term (Overt) would maintain its nuance better than translating it into 'God willing'.

The same can be said for the words *Rabon 'Ala (Line 11), Seulaweuet (Line 19-20), Surat (Line 24),* and *Seumurat (Line 32,35),* which were interestingly adapted to English by ChatGPT as "The Lord of the Worlds", "Blessings", "Wish", and "Just like", respectively. Nevertheless, these cultural adaptations have posed a severe issue, namely distortion of their original meanings, which are actually "The Most High/Exalted God", "Sending Praises, Prayers, and Blessings", "Express", and "Recite", respectively. One of possible reasons for the inaccuracies is a lack of Acehnese language input fed into ChatGPT. Thus, sufficient input is required to prevent issues, such as target readers' misconceptions of the *Ali Peureudan* chronicle and the risk of offending source language speakers.

However, there are a few cultural phrases (15%) that were transferred intact by ChatGPT to the target language using overt translation strategy, such as the word *Alhamdulillah* (Line 10), *Allah Ta'ala* (Line 15), *Saidna* (Line 19), and *Nibak Allah* (Line 38), maintaining their original semantic; however, only the word *Alhamdulillah* was kept overt in its original version yet accompanied by a description of its meaning 'Praise be to God' in a bracket, thus maintaining its originality as well as facilitating clarity for the target audiences at the same time. Meanwhile, the rest were undescribed. The latter approach is relatively fair for both source-text readers and target-text readers as it adheres to both source and target cultural norms, benefitting the two.

4. Conclusions

AI-driven machine translation, such as ChatGPT, has become a powerful and speedy tool for translation. However, its cultural sensitivity needs a careful assessment. The study found that ChatGPT has a significantly high rate of cultural insensitivity in translating the Chronicle of *Ali Peureudan*, a tale from Aceh Province containing both Acehnese and Arabic cultural terms. Based on the framework of Juliane House (2015), 85% of ChatGPT's translations of the culturally-specific words in the chronicle fell under the category of "Covert Translation", in which the phrases were adapted to the target language norms for readers' comprehension. However, such adaptation has led to generalization and semantic narrowing. In some cases, it has even led to significant meaning distortions leading to misinterpretations. Only 15% of the phrases were rendered overtly, in which the phrases remained unchanged, yet only one phrase was kept in its original version and accompanied by its meaning in English in a bracket. The latter strategy is deemed best as it maintains the phrase's contextual meaning as well as aiding in the target-text readers' comprehension at the same time.

As research examining cultural sensitivity of an AI-based machine translation such as ChatGPT has never been carried out previously, this research is expected to contribute as a key reference in this aspect. It can also be a valuable resource for those using ChatGPT as a translation tool, particularly for translating literary text which contains many culturally sensitive terms, like the Chronicle of Ali Peureudan, as well as providing insights to the ChatGPT developers to improve its system in terms of cultural sensitivity.

Due to the limited nature of this research, only a limited part of the chronicle can be investigated. Future research is recommended to include a longer part, or even compare the translations of two or more pieces of literary work for more accurate findings.

5. References

- Baker, M. (2018). In other words: A coursebook on translation (2nd ed.). Routledge.
- Barzilay, R., & Elhadad, M. (2019). Challenges of machine translation in the context of cultural nuances. *Journal of Language and Technology*, 34(2), 120-135.
- Clift, R. & Helani, F. (2010). Inshallah: Religious invocations in Arabic topic transition. Language in Society. 39. 357 382. 10.1017/S0047404510000199.
- Katan, D. (2019). Translation as intercultural communication. Routledge.
- Liu, L. (2021). The role of cultural sensitivity in AI-based language translation. *Journal of Translation Studies*, 23(4), 45-61.
- Schäffner, C. (2018). *Translation and culture*. Multilingual Matters.
- Suryani, E. (2018). The cultural significance of Acehnese folklore in modern translation practices. *Indonesian Cultural Studies Journal*, 14(1), 79-94.
- House, J. (2015). *Translation quality assessment: Past and present*. Routledge.
- Tahir, M. & Nasir, M.I. (2024). Analysis Of The Phrase Bismillah (A Thematic-Comparative Method Between Altabari's Interpretation And The Hadith Perspective). *Tafasir*. 2(1). https://doi.org/10.62376/tafasir.v2i1
- Pratama, H. (2017). Pragmatic Functions of Insya Allah In Indonesian Speeches. Issues in Language Studies. 6(2). https://www.ils.unimas.my/images/pdf/v6n2/v6n2 hendi.pdf