ANALYZING THE TRANSLATION QUALITY OF ENGLISH TO INDONESIAN TRANSLATION BETWEEN HUMAN TRANSLATION AND MACHINE TRANSLATION

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ABSTRACT; *This study investigated the differences of English to Indonesia translations by comparing outputs from both human translators and machine translation system. Through this comparative analysis, the linguistics accuracy, acceptability, and readability are evaluated. The translation results are assessed by certified bilingual individuals. This research employed descriptive study methodology. There are total of 28 sentences assessed by each one of the 3 assessors.*

Keywords: *Descriptive Study, English to Indonesian Translation, Human Translation, Machine Translation, Translation Quality*

INTRODUCTION

Translation has long been regarded as an immense challenge, with countless theoretical arguments suggesting its impossibility. Critics emphasize the inherent dissimilarities between languages, arguing that they fail to capture two seemingly identical realities. Yet, in the face of these limitations, translation perseveres as a vital and indispensable force in our world. It serves as a powerful channel, bridging the gaps between individuals from diverse cultural and linguistic backgrounds. Through translation, people gain the ability to share a more harmonious and all-encompassing perspective of the world, fostering understanding and appreciation among different societies. Despite its complexities, translation continues to shape a more connected and inclusive global community (Baker, 2018).

Over the years, translation has evolved as a discipline, with scholars and practitioners delving into its theoretical foundations and practical applications. Translation studies emerged as an interdisciplinary field that examines the complex processes involved in translation, exploring issues such as equivalence, cultural mediation, and translation strategies (Baker, 2018; Venuti, 2012).

With the advancement of technology, machine translation has emerged as an alternative to traditional human translation. Machine translation systems employ algorithms and artificial intelligence to automatically translate texts from one language to another (Koehn, 2021). These systems have gained popularity due to their speed and convenience, allowing for the quick translation of large volumes of text. They have found applications in various domains, such as website localization, document translation, and instant translation services.

However, machine translation systems are not without their limitations. They often struggle with capturing the nuances, idiomatic expressions, and cultural references inherent in human language. Machine translation relies heavily on statistical patterns and algorithms, which may lead to inaccuracies and misinterpretations, particularly in complex and context-rich texts. Cultural nuances and idiomatic expressions, which are essential for conveying meaning accurately, can be challenging for machine translation systems to handle effectively (Venuti, 2017). These limitations have led to ongoing debates regarding the role and impact of machine translation in the field of language and translation studies, and this research will use one of machine translator known as google translate in order to produce text result.

All mentioned reason above suffices in laying foundation for this research to be possible, this research will analyze the translation quality from both human and machine translators to draw better insight on what possible relation will both party have in common, and their differences.

Research Purposes:

This Research is conducted to find out the quality differences of human translations and Google Translate translations result in the context of English to Indonesian translation, to analyze the quality of translations produced by human translator and Google Translate in the context of English to Indonesian translation, and then to explore the impact of these differences in translation practice.

RESEARCH METHOD

The design of this research will employ quantitative research method, which is a methodological approach that aims to provide a detailed and comprehensive account of a phenomenon, event, or situation as it naturally occurs (Creswell, 2018). This research method

is characterized by its focus on capturing the "what" and "how" of a particular subject, without necessarily seeking to develop or test theory. Instead, it seeks to describe and understand the intricacies of the phenomenon under investigation. The descriptive research method is employed to describe or analyze research findings without attempting to draw extensive generalizations. The primary goal of descriptive research is to provide an objective representation of the problems as they exist during the study.

In line with expert opinion, it can be inferred that descriptive research focuses on presenting a comprehensive and unbiased account of the subject matter under investigation. The aim is to obtain an objective and factual understanding of accuracy between results from both human translation and machine translation, without attempting to make broader or far-reaching conclusions based on the findings.

This research will use several texts in form of paragraph sourcing from the website www.genshin.hoyoverse.com, the translation text results from both human translation and machine translation will be used as objects in this research. There are 5 texts which breaks down into 14 sentences for each translation result from human and machine. Translation results from machine will need manual input from the researcher into the translation system (Google Translate), meanwhile, Translation results from human translator are already made available by the language localization specialist as stated in the Hoyoverse webpage. The list of text that will be translated are:

1. A city of freedom that lies in the northeast of Teyvat.
2. From amongst mountains and wide-open plains, carefree breezes carry the scent of dandelions – a gift from the Anemo God, Barbatos – across Cider lake to Mondstadt, which sits on an island in the middle of the lake.
3. A bountiful harbor that lies in the east of Teyvat.
4. Mountains stand tall and proud alongside the stone forest, that together with the open plains and lively rivers make up Liyue's bountiful landscape, which shows its unique beauty through each of the four seasons.
5. Just how many gifts from the Geo God lie in wait amongst the rocks of Liyue's mountains?
6. An isolated archipelago far east of Teyvat.

7. Overcome endless thunderstorms and set foot on the islands of red maple and cherry blossoms.

8. On winding shores and towering cliffs, and in forests and mountains full of secrets, witness the eternity pursued by Her Excellency, the Almighty Narukami Ogosho.

9. The city of scholars located in the west-central part of Teyvat.

10. A fantastical nation of both lush rainforest and barren desert, where countless fruits of wisdom grow and are buried.

11. Whether travelers travel from afar through the forest to reach the academy city or delve deep into the desert to discover the historical ruins of the red desert, a wealth of valuable knowledge awaits them here.

12. A terrestrial sea in the center of Teyvat.

13. Following the direction of pure currents, crossing wilderness, the depths of the forests and vastness of the sea of sand, arriving at the origin of all the waters of the continent.

14. At the top of the waterfall, in the depths of the capital atop the terrestrial sea… a story that has never been heard, a legend that has been forgotten, like a lost kingdom sunken beneath the waves, yearning for a bard to sing its drowned songs.

The data collection technique employed in this study is the sorting of sentences extracted from a diverse set of texts. The sorting process is utilized to systematically organize and categorize sentences based on predefined criteria, enabling a comprehensive analysis of textual content. This technique aims to provide insights into patterns, themes, and relationships present within the collected data.

For the data collection tool, the manual sorting method employing digital note-taking apps was chosen. This traditional approach allows for a hands-on and tactile engagement with the collected sentences. Sentences extracted from the selected texts were transcribed onto individual notes, preserving their original context. Physical categories were created, each representing results from human translation and machine translation and also retaining the source text. This method facilitated a close interaction with the textual content, enabling a nuanced understanding of the material. The manual sorting approach proved particularly suitable for this study's manageable dataset, ensuring a meticulous and personalized categorization process.

In order to assess the level of translation quality in conveying messages, it is essential to compare the messages in both the source language text and the target language text. Following criteria is proposed by Nababan (2012), it can serve as an effective instrument for measuring translation quality. By employing this method, one can identify the scoring for each aspect for every sentence. The process involves comparing the translation with the instrument for measuring translation equivalence and elucidating the matching strategy employed.

By utilizing this approach, translators and researchers can gain insights into the quality of the translated content and identify areas that may require improvement or refinement. It provides a systematic and objective means to evaluate the success of a translation in faithfully preserving the original message and meaning.

Every sentence's accuracy will be assessed using table from Nababan (2012). Every aspect will hold different value, 3 for accuracy, 2 for acceptability, and 1 for readability.

For Accuracy aspect, in order to get full score of 3 then, the meaning of words, technical terms, phrases, clauses, sentences or source language texts must be accurately transferred from the source language (English) to the target language (Indonesian), and there is no distortion to the meaning.

For Acceptability aspect to achieve the score of 3, the target translation must be natural; technical terms used are common and familiar to readers; the phrases, clauses and sentences used are also in line with the rules of the target language.

Lastly, for the Readability aspect to achieve the score of 3, the target translation must be easy to understood by readers, this means The word, phrase, clause, and sentence of translation is easy to understood by the native speaker of the target language (Indonesian).

RESULTS AND DISCUSSION

Table 1. Accuracy Data

No.	Accuracy Level	Human Translator Data	Machine Translator Data
1	Accurate	22 (x 3)	23 (x 3)
2	Less Accurate	19 (x 2)	14 (x 2)
3	Not Accurate	1 (x 1)	5 (x 1)
Total	Average	105 : 42 = 2,5	102 : 42 = 2,42

Accuracy is assessed by comparing if the translation has the same meaning as the source text and the messages is delivered accordingly. Out of 42 data combined from the 3 assessors, Human translation results showed 22 accurate translations, 19 less accurate translations, and 1 not accurate translation. Meanwhile Machine translation results showed 23 accurate translations, 14 less accurate translations, and 5 not accurate translations this indicates that both human translations and machine translations is not accurate enough with only around 50% of accuracy. But from the shown data, we can also infer that Google Translate machine translation system have higher percentage of translating not accurate translation which is 5 sentences rather than human translator which is 1 sentence.

For the acceptability data

Table 2. Acceptability Data

No.	Acceptability Level	Human Translator Data	Machine Translator Data
1	Acceptable	35 (x 3)	16 (x 3)
2	Less Acceptable	7 (x 2)	23 (x 2)
3	Not Acceptable	0 (x 1)	3 (x 1)
Total	Average	119 : 42 = 2,83	97 : 42 = 2,30

Translation is considered acceptable if it conveys the message from source text into target language with consideration of common vocabulary/words used in the target language, and comply with the grammars of the target language. From 42 combined data of the 3 assessor, human translation results showed 35 acceptable translations, 7 less acceptable translations, and 0 not acceptable translation, while machine translation results showed 16 acceptable translations, 23 less acceptable translations, and 3 not acceptable translations. Albeit having relatively equal stance on the accuracy aspect, in the acceptability aspect, Google Translate machine translation system have much more less acceptable and not acceptable translation which is respectively 23 and 3, whereas human translator only produce 7 less acceptable translation and 0 not acceptable translation

For the readability data

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Table 3. Readability Data
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No.	Readability Level	Human Translator Data	Machine Translator Data
1	Readable	42 (x 3)	31 (x 3)
2	Less Readable	0 (x 2)	9 (x 2)
3	Not Readable	0 (x 1)	2 (x 1)
Total	Average	126 : 42 = 3	113 : 42 = 2,69

In term of readability, the translation result should be easily understood by the reader and usually only needs to be read once in order to understand the sentence. From 3 assessor combined there are 42 data, human translation results showed 42 readable translations, 0 for less readable translation, and also 0 for not readable translation, while the machine translation results showed 31 readable translations, 9 less readable translations, and 2 not readable translations. In this aspect, all human translation results are deemed as readable by the assessors meanwhile Google Translate machine translation results has 9 less readable translation and 2 not readable translation.

Total Average score of Google Translate translation quality:

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Table 4. Total average translation score for Machine Translation
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Assessor	Average Score			Total	Average Total
	Accuracy	Acceptability	Readability		
H	2,07 x 3	2,5 x 2	2,78 x 1	13,99	13,99: 6 = 2,29
T	2,85 x 3	2,28 x 2	2,92 x 1	16,03	16,03: 6 = 2,67
S	2,35 x 3	2,14 x 2	2,35 x 1	13,68	13,68: 6 = 2,28
Total	7,27 x 3 = 21,81	6,92 x 2 = 13,84	8,05 x 1 = 8,05	43,7:3	14,56: 6 = 2,42

From calculating the scoring based on the score from the 3 assessors, the machine translation results quality's average is 2,29; 2,67; and 2,28. Combined sum will lead to average

of 2,42 for Google Translate translation quality. The highest aspect in machine translation results is readability with the total score of 8,05; whereas 7,27 point for accuracy and 6,92 point for acceptability.

Total Average score of Human translation quality:

<p align="center">Tabel 5. Total average translation score for Human Translation</p>

Assessor	Average Score			Total	Average Total
	Accuracy	Acceptability	Readability		
H	2,71 x 3	3 x 2	3 x 1	17,13	17,13: 6 = 2,85
T	2,21 x 3	2,85 x 2	3 x 1	15,33	15,33: 6 = 2,55
S	2,57 x 3	2,64 x 2	3 x 1	15,99	15,99: 6 = 2,66
Total	7,49 x 3 = 22,47	8,49 x 2 = 16,98	9 x 1 = 9	48.45: 3 = 16.15	16.15: 6 = 2,69

From calculating the scoring based on the score from the 3 assessors, the human translation results quality's average is 2,85; 2,55; and 2,66. The combined sum will lead to average of 2,69 for translation quality. The highest aspect in Human translation results is readability with the total point of 9, whereas it is 8,49 for acceptability and 7,49 point for accuracy.

CONCLUSION AND SUGGESTION

Conclusion

Out of 3 aspects of translation, readability have the highest single score aspect with the total sum from 3 assessors of 2,56 for google translate translation result and 3,0 for human translation result. This result shows that the translation result could be understood by the reader without the needs of reading the texts more than once. Whereas for the total sum of translation quality for all 3 aspects by the 3 assessors within the scale of 3 as the highest point, results in average of 2,38 for google translate translation result and 2,66 for human translation result.

This could lead to assumption of human translation result being better than machine translation result, but the point of 2,66 is not necessarily far more superior than 2,38. Because

there are several aspects in translation which is not being accounted for, like time efficiency and translation costs. Therefore, we can define that human translation result is good, whereas google translate translation result is less good.

During the process of investigating the translation quality between human translators and Google translate, several noteworthy points is found in their respective outputs. This research results shown that Human translator and Google translate tends to have the same level of accuracy, which then contradicts with the results from Munthe (2023) which said "(1) the accuracy of the Google Translate has an average score 2.36 which is categorized as less accurate. (2) the accuracy of the Professional Translator has an average score 2.88 which is categorized as accurate. So, the score translation of Professional translator is higher than the score of Google translate."

Meanwhile, for the acceptability and readability, Google Translate shown to be less acceptable and less readable than Human translation results, which is in line with the research result from Ningrum & Yuliasri (2023) which shown that Google translate produce less acceptable and less readable translation quality.

Suggestion

One noteworthy aspect of the findings was the consistent occurrence of grammatical errors in Google Translate outputs. Although the tool must already employ sophisticated algorithms with all the experience gained by the engineer from the past until now, it still grappled with the complexities of Indonesian grammar and sentence structure. Human translators, on the other hand, shown a more nuanced understanding of Indonesian syntax, resulting in a more grammatically polished translation.

Further research can be investigated regarding the efficiency and cost of employing the human translator or Google translate machine translation system. The discussion on these findings emphasizes the irreplaceable role of human translators in maintaining translation quality, especially when dealing with languages as intricate as English and Indonesian. While Google Translate offers a valuable tool for quick and basic translations, its limitations become apparent when confronted with the depth of linguistic nuances and cultural context inherent in translation tasks. Future developments in machine translation may alleviate some of these limitations, but the need for human expertise in preserving linguistic and cultural integrity

remains paramount. This research underscores the importance of a nuanced approach, combining the efficiency of technology with the finesse of human translators to achieve optimal results in English to Indonesian translation tasks.

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