

An Analysis on Indonesian-English Abstract Translation by Google Translate

Deri Herdawan

Politeknik Maritim Negeri Indonesia

deriherdawan@polimarin.ac.id

***Abstract.** Many international journals require authors to translate their articles into English, mostly the abstracts. The advancement of technology has paved the way to the invention of machine-translators, one of which is Google Translate. This research seeks to investigate (1) what translation method is currently used by Google Translate, and (2) what type of errors are committed by Google Translate in Indonesian-English abstract translation. A descriptive qualitative design was used in this research. Documents in the form of 15 abstracts (ca. 3500 words) were used in data analysis. The results showed that Google Translate implemented the literal translation method. In doing its translation, it committed several linguistic errors and many translation errors. Detailed results were presented and discussed in the coming sections, followed by recommendations for further research.*

Keywords: *abstract; error in translation translation method; google translate*

A. INTRODUCTION

As an international language, English plays a significant role in the world of research publication. Many international journals require authors to translate their articles into English. Universities in Indonesia have also taken a similar approach to their students' articles, especially the abstract part. Therefore, a translation process from Source Language (SL), Indonesian, into Target Language (TL), English, is heavily involved. This underlines the significant role of translators.

The quality of a translation depends mainly on the abilities of its translator. It is not only merely changing words, but also involves the process of comprehending meanings from SL and re-conveying them in TL (Putri, 2019). Consequently, errors are often found in translation results, in various degrees depending on the translators' ability.

The advancement of technology has begun to take over everything manually and turned them into automation. The same goes in the world of translation. Many machine-translators (MTs) have been invented as an effort to facilitate the need for translation. One of the most used machine-translators is Google Translate (GT), a free multilingual MT developed by Google.

The emerging issue is whether the quality of translations produced by GT can match those of human translators. GT was launched in 2006 and run on a statistical machine translation engine. That particular engine did not apply grammatical rules in its algorithm. In addition, when English was not the TL or SL, it translated SL to English to TL instead of doing SL to TL directly. These reasons prompted the less than desired translation results. Researchers have shown that translation errors were found in the results (Ghasemi & Hashemian, 2016; Napitulu, 2017; Halimah, 2018, Rahmannia & Triyono, 2019).

Google has since improved the GT engine to produce better translations. Accordingly, the analysis on its translation results should be done periodically. Therefore, this research seeks to investigate (1) what translation method is currently used by GT and (2) what type of errors are committed by GT in Indonesian-English abstract translation.

B. LITERATURE REVIEW

Translation

The translation is by no means an easy task. It is far from the simple work of substituting word for word of a language to another. Newmark (1988) stated translation refers to the activity of rendering a text in a way the author intended to. Such a statement was also elaborated by Cuc (2018), which mentioned translation as a process of transferring meanings and senses that the author wanted to convey to his audience.

On the surface, a translation sounds like a textual-linguistic operation. However, in order to produce a faithful translation of SL to its TL, several extra-linguistic aspects should be considered. This is as stated by House (2016) that translation involves not only cross-linguistic but also cross-cultural factors. Yousofi (2014) further mentioned that knowledge of linguistics, sociolinguistics, and other fields are necessary to produce a quality translation.

In summary, translation is a complex linguistic process of conveying an author's ideas by paying attention to several extra-linguistic aspects to ensure the intended ideas reaching his audience.

Translation Method

Before actually doing translation, translators need to decide which translation method will be implemented. A translation method is a way a translation is carried out to meet the translator's intention, purpose, or aim (Hartono, 2020). This decision dramatically influences the overall translation product. Ordudary (2007) stated that the translation method covers the whole text instead of the translation technique, which deals with smaller units of language, such as sentences.

Newmark (1988) mentioned eight translation methods; word-for-word, literal, faithful, semantic, adaptation, free, idiomatic, and communicative translations. The first four methods focus on the text in SL, while the second four methods emphasize text in TL.

Errors in Translation

Any non-equivalencies between SL and TL are considered as errors in translation (Koller, 1979). It is daunting for translators as what might seem linguistically equivalent is not necessarily so, translation-wise. Thus, saying that this kind of error is the main enemy of translators is an understatement. Translators are often criticized for any errors they commit but rarely appraised for doing a good job.

For the past few years, the number of research on errors committed in translation has surged. It is beneficial as the results could explain the nature and degree of translation errors (Kafipour & Jahanshahi, 2015). Various identification of errors was used in those research as there is no firm framework yet that clearly and strictly defines what is meant by errors in translation. In their study, Ghasemi & Hashemian (2016) and Napitulu (2017) identified errors they found in lexico- semantic, tense, preposition, word order, verb group, and active and passive voice and analyzed them quantitative and qualitatively, respectively. Halimah (2018) took a different approach as she identified errors based on semantic, syntax, and morphology errors. Meanwhile, Popescu (2013) and Cuc (2018) analyzed their findings based on three classifications of errors; linguistic, comprehension, and translation. Kafipour & Jahanshahi (2015) adapted Liao's model in his research; rendition, language, and miscellaneous errors, which is actually similar to the one used by Cuc. Lastly, Salam et al. (2017) presented in their paper that translation errors could fall into one of inversion, omission, addition, deviation, and modification categories.

Google Translate

One of the most commonly-used MTs is GT. The machine is capable of translating various forms of SL, complemented by the fast turn-around of TL. Furthermore, by the time this research was conducted, it supports translation from and into 109 languages. GT seems to be the simplest and easiest to access translation tools available for users (Medvedev, 2016).

GT was launched in 2006 and running on a statistical machine translation engine. The engine was far from perfect as it attempted to translate sentences piece by piece. This engine also took the long way of translating by going from SL to English to TL instead of doing it directly from SL to TL, affording more room for errors. Consequently, its translation results have been criticized; one of the earliest work was by Aiken & Balan (2011). However, GT has now switched into a neural machine translation engine, which is claimed to provide better results. This new engine attempts to translate ‘a whole sentence at a time’, bypass the need of English as a language mediator, and introduce context recognition.

C. RESEARCH METHOD

By considering the aforementioned objectives of the research, a descriptive qualitative design was used in this research. Fifteen pre-translated abstracts in Indonesian were obtained from a translation agency and used for analysis. The abstracts covered various topics of social sciences and natural sciences, both qualitative and quantitative designs. There were approximately 3500 words in total out of those 15 abstracts. A lecturer in charge of teaching Indonesian language subjects checked those abstracts regarding their sentences' effectiveness, making necessary adjustments. Using GT, those abstracts were then translated into English.

The data used were in the form of sentences, phrases, and words. The fundamental data analysis can be summarized into three steps; data condensation, data display, drawing, and verifying conclusion (Miles et al., 2014). For the first research objective, several sentences were selected. Analysis was done to confirm the translation method in use and verification was performed by comparing the results with explanations and examples provided by Hartono (2020). For the second research objective, data were condensed through the errors identification process. Identified errors were tabulated and displayed. The final step was classifying those errors by adapting the model used by Popescu (2013) where the researcher attempted to investigate them from both languages point of view. Linguistic error classification, focusing on TL in isolation, was used. It consisted of three sub-classifications; morphological, syntactic, and collocational errors.

Moreover, translation error classification, focusing on a comparison between SL and TL, was also used. This one consisted of four sub-classifications; distortion of meaning, addition, omission, and inaccurate rendition of a lexical item. To maintain the trustworthiness of data, the researcher asked for assistance from two colleagues in identifying those errors.

D. FINDINGS AND DISCUSSION

Translation Method used by GT

The results showed that GT implemented the literal translation method in performing its job. The following sample sentence from an abstract will be used to elaborate that statement.

“...dalam pengelolaan transportasi umum atau publik di Kabupaten Sidenreng Rappang.”

The Word-for-word translation method, as the name suggests, places words of TL directly under SL. It translates words one by one, detached from the structure and

context in which the words occur. The translation result of this method for the above sentence should be:

- Source : *...dalam pengelolaan transportasi umum atau publik di Kabupaten Sidenreng Rappang.*
WFW : ...in management transportation public or public in Regency Sidenreng Rappang

The literal translation method offers a better mechanism than the previous method. Here, the translator searches for grammatical construction of SL that is similar, matching, or equivalent to that of TL, albeit still leaving the context intact. Using this method, the above sentence should be translated into the following sentence:

- Source : *...dalam pengelolaan transportasi umum atau publik di Kabupaten Sidenreng Rappang.*
Literal : ...in the management of public or public transportation in Sidenreng Rappang Regency.

The precise translation method attempts to reproduce the contextual meaning of SL by retaining the grammatical form of TL. This method adheres to the objective and style of SL more than the previous two ways. The translation result of this method for the above sentence should be:

- Source : *...dalam pengelolaan transportasi umum atau publik di Kabupaten Sidenreng Rappang.*
Faithful : ...in the management of communal or public transportation in Sidenreng Rappang Regency.

The following figure displays the result of the sample sentence directly taken from GT.

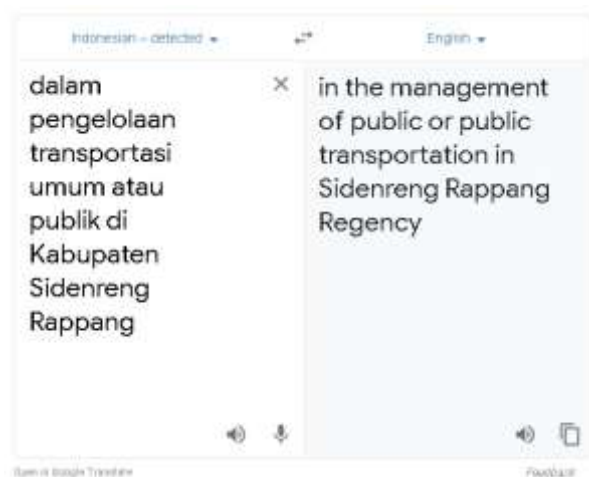


Figure 1. Screen Shot of Google Translate Result (taken on October, 2020)

Compared to the examples, the displayed result shows the closest resemblance to the literal translation method. In this sense, GT managed to translate the grammatical form of SL, resulting in a good counterpart in TL, as opposed to what is shown in word-for-word method. However, it failed to pick the context where the author tried to emphasize the word “pengelolaan transportasi” by repeating its adjective of “umum” and “publik”. GT translated them into the same word of “public” and “public”, instead of using two different terms such as “communal” and “public”. This result provides an update to that of Halimah’s (2018) in which she stated that GT seemingly translated word by word.

Errors in Indonesian-English Abstract Translation Committed by GT

As previously mentioned, data were manually collected, identified, classified, and percentage as part of their analysis. There were errors found in both linguistic and translation categories. However, the number of linguistic error was far less compared to a translation error.

Linguistic Error

There were only 6 errors identified in the linguistic category, belonging to syntactical sub-classification. The relatively summary is presented in Table 1 below.

Table 1. Summary of Linguistic Errors Committed by GT

	Type of Error	Frequency	Percentage (%)
Linguistic Error	Morphological	-	0
	Syntactical	6	100
	Collocational	-	0
	Total	6	100

Also, here is an example of those errors.

- Source : *Hidrogel nanocomplex Carboxymethyl Chitosan dapat mempertahankan kelembaban kulit...*
- GT : Hydrogel nanocomplex Carboxymethyl Chitosan can retain skin moisture...
- Key : **Carboxymethyl chitosan nanocomplex hydrogel** can retain skin moisture ...

All of these syntactical errors involved word ordering when unknown or technical terms appeared in a phrase. As GT did not know the word class, it left those words alone in term of word order and only attempted to translate words which existed in its system (shown by *hidrogel* being the only word translated). For this reason, all syntactical errors were also classified into translation errors (inaccuracy rendition of the lexical item), or rather the latter led to the former. No other linguistic error was found in this research.

This result acts as a defense for GT, which has been heavily criticized by researchers. Despite its flaws in translating, it still boasts some advantages over a human translator. Human translators were shown to commit many linguistic

errors, especially those who were not proficient in English (Popescu, 2013; Cuc, 2018). Meanwhile, in her research Halimah (2018) identified many errors in English-Indonesian translation by GT. Our conflicting results bring a new question over the accuracy of GT in translating different languages, with translation from SL to English seemingly more accurate than English to TL.

Translation Error

There were 97 errors found in this classification. Distortion of meaning error came up with the highest percentage of errors (78%), followed by inaccurate rendition error (21%). No omission or addition error was found. The following Table 2 presents the recapitulation of these errors and their classification:

Table 2. Summary of Translation Errors Committed by GT

Type of Error		Frequency	Percentage (%)
Translation Error	Distortion of Meaning	76	78
	Omission	-	0
	Addition	-	0
	Inaccurate Rendition of Lexical Item	21	22
Total		97	100

Wrong tenses usage made up most of the distortion of meaning errors. Here is an example of this error:

- Source : *Peningkatan hubungan interpersonal sebesar 17.2% dan terlihat pada semua aspek hubungan interpersonal.*
- GT : The increase in interpersonal relationships is 17.2% and can be seen in all aspects of interpersonal relationships.
- Key : The increase in interpersonal relationships **was** 17.2% and **could** be seen in all aspects of interpersonal relationships.

American Psychological Association (2020) states that the present tense should be used in displaying a general fact or opinion, continuity applicability, or drawn conclusion. Meanwhile, the past tense is used to elaborate action taken during research and its results. However, this research results showed that GT was unable to pick the context of already done action, not without the help of time signals. Abstracts are meant to be concise; thus time signals are considered unnecessary. This particular result concerning the error in tenses usage further confirms previous ones by Ghasemi & Hashemian (2016) and Napitulu (2017). It implies that the GT engine still has not improved yet in this regard.

Inaccuracy rendition of lexical item errors were identified on two occasions. The first was when an unknown term was involved, as discussed in the previous section (see the linguistic error). The second inaccuracy rendition was shown when two identical words (such as *penelitian*) were translated into different words (study and research) because they were located in different sentences. The same case happened to abbreviations, such as PNS, SMA, SMK, and Puskesmas. On some occasions, they were correctly translated; in some others, they were not. This inconsistency further proves that GT did not use context as in translating, as shown in the research result of Ghasemi & Hashemian (2016) and Napitulu (2017).

Lastly, there was no omission and addition error found in this research. This is in contrast to the findings of Popescu (2013), Salam et al. (2017), and Cuc (2018) in their study. The reason is that their translations were done by human translators who are more prone to these types of errors. This result highlights the benefit of the literal translation method used by GT, as this method makes sure that every word is translated from SL to TL. However, research by Rahmannia & Triyono (2019) identified addition and omission errors in their analysis. Our different sources of data may be the reason behind these differing results. Theirs were news

item texts, and here's were abstracts, with sentences in abstract tend to be more formal and direct.

E. CONCLUSION AND SUGGESTION

Conclusion

GT has been shown to translate using the literal translation method. It boasts more grammatical accuracy compared to the word-for-word method, as offered by very few linguistic errors committed. Being a machine proves beneficiary as well for GT. It does not make omission or additional error in translating as human translators do. However, it still fails to pick the context involved in a text. This is a significant setback that leads to two kinds of translation errors; distortion of meaning and inaccuracy rendition of lexical items. Both errors compromise the content of abstracts leading to the varying degree of non-equivalencies. That being said, it is necessary to have a skilled translator to check the result of GT's translation by looking at the context as a whole.

Suggestion

Further research should be conducted on this topic as Google keeps trying to improve the engine used to run GT, with more significant data or different translation error classification. Another option is to investigate a strategy that can be used to better the translation result by modifying or adjusting the text in SL.

F. REFERENCES

Aiken, M., & Balan, S. (2011). An analysis of Google Translate Accuracy. *Translation Journal*. Vol. 16 (2)

APA. (2020). *Publication Manual of the American Psychological Association, 7th Edition*. USA: APA

Cuc, P. T. K. (2018). An Analysis of Translation Errors: A Case Study of Vietnamese EFL Students. *International Journal of English Linguistics*. Vol. 8 (1), 22-29

Ghasemi, H., & Hashemian, M. (2016). A Comparative Study of Google Translate Translations: An Error Analysis of English-to-Persian and Persian-to-English Translations. *English Language Teaching*. Vol. 9 (3), 13-17

Halimah. (2018). Error Analysis in English-Indonesian Machine Translate. In *International Seminar on Education and Development of Asia*. Semarang: Universitas Muhammadiyah Semarang

Hartono, R. (2020). *Translation Techniques & Methods: The Essential Reference for Translators*. Semarang: LPPM UNNES Press

House, J. (2016). *Translation as Communication across Languages and Cultures*. New York: Routledge

Kafipour, R., & Jahanshahi, M. (2015). Error Analysis of English Translation of Islamic Texts by Iranian Translators. *Journal of Applied Linguistics and Language Research*, Vol. 2 (3), 238–252

Medvedev, G. (2016). Google Translate in Teaching English. *Journal of Teaching English for Specific and Academic Purposes*. Vol. 4 (1), 181–193

Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook, 3rd Edition*. USA: Sage Publications

Napitulu, S. (2017). Analyzing Indonesian-English Abstracts Translation in View of Translation Errors by Google Translate. *International Journal of English Language and Linguistics Research*. Vol. 5 (2), 15–23

Popescu, T. (2013). A Corpus-based Approach to Translation Error Analysis. A Case-study of Romanian EFL Learners. *Procedia Social and Behavioral Sciences*. 83, 242-247

Rahmanna, M., & Triyono, S. (2019). A Study of Google Translate Translations: An Error Analysis of Indonesian-to-English Texts. *International Journal of Linguistics, Literature, and Translation (IJLLT)*. Vol. 2 (3), 196-200

Putri, T. A. (2019). An Analysis of Types and Causes of Translation Errors. *Etnolingual*. Vol. 3 (2), 19-29

Salam, Z. M., Akil, M., & Rahman, A. Q. (2017). Translation Errors Made by Indonesian-English Translators in Crowdsourcing Translation Application. *ELT Worldwide*. Vol. 4 (2), 195-204

Yousofi, N. (2014). Describing the Errors in the Translations of Iranian Novice English Translators. *Procedia - Social and Behavioral Sciences*. 98, 1952– 1958