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ABSTRACT

This study seeks to investigate the quality of translation generated by a popular Machine Translation (MT) platform, viz. Google Translate (GT) in translating the content of a Russian flight charterer's website from English into Indonesian. To analyze the translation quality produced by MT, we compared the original translation of the website texts translated by a human translator and the machine-translated version. The translation quality is limited to the readability level. The texts serving as the data were collected from the menus of a Russian flight chartering service website which was originally translated by an Indonesian translator. An analysis further discovered that the translation produced by MT is divided into two quality categories: less readable and readable. The less readable translation is caused by MT's inability to adjust to stylistic forms in Indonesian, failure to do adaptation strategy and in some cases, MT tends to follow the same sentence structure of the original text (source text).

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1. INTRODUCTION

The beginning of the emergence of google translate (GT) was when one of the founders of Google, Sergey Brin received a letter from a fan who spoke Korean and none of them understood the language. Brin then translated the letter through his machine translator. A piece of the letter was then written: "The sliced raw fish shoes it wishes. Google green onion thing!". Brin had to wince as he read the reader's results. From here the inspiration to make a reliable machine translator, until finally GT was born. GT is one of the features of the Google search engine to answer user needs for foreign language translation. In certain types of text, GT is indeed useful in providing translations. Short texts with simple sentence structures, which have low or no cultural content in diction, or texts whose sentence structure is similar to Indonesian, will be able to be adequately translated by GT (Jolicœur & Amini, 2015). The results of the translation for texts like this will give a message that does not deviate much from the message in the original text. With google translate, humans can translate words from various languages in the world. Machine translation has become popular among people who need it for commercial, academic, and recreational purposes. In the early 2000s machine translation (MT)

became available at the click of a link using providers such as GT (Stapelton & Kin, 2019). Its continuous development has made it a language tool that people cannot live in. We can find MT text in public places such as tourist attractions, train stations, and shops. Different users use it for different needs including creating texts to reach target consumers. However, there is debate and evidence that MT does not work well with certain texts and for certain language pairs.

Google Translate has also now replaced the bold dictionary position that was used to translate words (Al-Mahasees, 2020). With the advantages of GT, you don't need to type because it is equipped with a voice recorder feature. In addition, the way to translating words in GT can also be done simply by taking pictures (Kelly & Bruen, 2015). Even with this feature, humans can talk to strangers they meet. GT like other automatic translation tools has some limitations. Although it can help readers to understand the general content of foreign language texts, it does not provide an accurate translation. A translation quality assessment on a machine translator is needed to find out how accurately a machine translator translates a text. This is important as stated by Martin in the following quote "A person that uses an MT wants to obtain an acceptable and correct translation of the original text. For this reason, assessing the quality of a translation can be difficult for an end-user". Martin also quoted Stejskal's opinion that "Obviously, such person is unable to independently assess the quality of the translation because even if the translated text reads beautifully, it could say something completely different than the original". On this basis, it is necessary to evaluate the MT.

Therefore, many studies in the field of machine translation on various platforms have been carried out to assess its quality, such as example-based, open-source, pragmatic-based, rules-based, and statistical machine translation (Elliot, 2006). Of the various forms of machine translation, Google Translate has become the most studied and serves as the most well-known machine translation applicable, in recent years (Aziz et al., 2012; Karami, 2014; Komeili et al., 2011).

The need for high translation is seen as an opportunity to develop technology that functions to help translate, and the technology is known as MT. The MT is designed to translate text from a source language to a target language by trying to resemble the capabilities of a professional translator. GT is an MT that is widely used by many people to translate from one language to another. GT's free service makes it the choice of many people for machine-assisted translation. Google continues to innovate to produce the best service for its users. In November 2016, Google innovated the GT. MT by evolving from the Statistical Machine Translation (SMT) model to Neural Machine Translation (NMT). This development is certainly expected to produce better and more accurate translation results. Currently, Google has succeeded in providing free translation services for 103 languages in the world

So far, no studies have been conducted to evaluate the localization or translation quality of websites using MT. However, quite a several studies have investigated the use of MT and assessed its quality in translating different types of texts with different language pairs. These studies include: Aiken & Balan (2011) assessed the quality of GT's translations into 50 different languages. They found that GT translated European languages into other European languages much better than Asian language pairs. Aghayi & Azer (2015) condresearchedluation of MT Quality of Padideh Software Translator and GT. Their research focuses on English to Persian translation. With a black box type evaluation model, comparative and adequacy-oriented, they assess the quality of the translation. Their research found that Google Translate was better than Padideh in translating six types of text with satisfactory translation. Vidhayasai et al (2015) examine the Errors and Implications of Using Google Translate in the "Terms and Conditions" text on the Official Airline Website. Their research focuses on English to Thai translation. It was found that errors occurred at three main levels: lexical, syntactic, and discursive. In addition, MT, including GT, tends to translate word for word, not on a standard translation pattern. Sense for-sense translation seems nearly impossible because its capacity is not designed for deep interpretation of different languages. Another research on GT as an MT was conducted by Bozorgian and Azadmanesh (2015). In terms of subject-verb fit, they concluded that GT failed to match subject-verb well when translating English sentences into Persian, unlike human

translators. The research reinforces the fact that there has been no Research on Engine Translating and Website Localization. Therefore, it is very important to analyze how the Translator Engine performs on website translations, especially for English-Indonesian pairs.

This research focuses on two things, the first is MT and the second is Website Localization. These two aspects are rarely linked in translation studies research. Many studies have been done on engine translation, but research on the use of engine translation for website localization is rarely done. Referring to these problems, this research is formulated into two questions, namely to describe the quality of the translation engine in website localization by referring to the level of readability and knowing what errors the engine translator produces in translating web content.

2. METHODS

This research is qualitative research with a comparative qualitative research design. The research was carried out in natural conditions which produced natural data, in the form of written words from what was studied (Sugiyono, 2006). This research is comparative because it was conducted to compare two groups of a variable, namely Google translate and other MT. GT research data was used in this study for top-level translation quality when compared to other online MT services (Hampshire & Salvia, 2010). We collect data from <https://avia.app/id> for the Indonesian version (target text) and <https://avia.app/en/> for the English version (source text), a flight charter website based in Russia. The researcher chose the text himself in the form of words, phrases, and sentences translated by GT and another MT. Of the many techniques for assessing translation quality, we chose the Nababan & Nuraeni (2012) model and narrowed it down to readability. To assess the accuracy of the website content used with the machine, a professional linguistic reviewer was engaged. The following rubric scale provides a score for each translation of the unit sentence.

Table 1. Scale for Scoring Readability Level

Scale	Definition	Description
3	Readable	The translation is very easy to understand.
2	Less Readable	The translation is quite easy to understand; the readers need to read some parts more than once to understand the translation.
1	Not Readable	The translation is difficult to understand.

The scores were then put in a table next to the original translation (OT) and Google Translation (GT). The results were then discussed in terms of errors produced. This evaluation is called Human evaluation of machine translation (HEMT) which includes adequacy, fidelity, and fluency of the translation services (Malik et al., 2013).

3. FINDINGS AND DISCUSSION

In this section, upon scrutinizing the texts and analyzing possible errors produced, we elaborate the findings sentence per sentence.

Table 2. Sentence Pair No. 1

Source Text (ST)	Original Translation	Google Translate (GT)	Readability level
A chartered private jet is an entirely different experience compared with a flight by an ordinary commercial airline.	Dengan Jet pribadi carteran anda memiliki pengalaman yang jauh berbeda dengan penerbangan maskapai komersial biasa.	Sebuah jet pribadi sewaan adalah pengalaman yang sama sekali berbeda dibandingkan dengan penerbangan oleh maskapai penerbangan komersial biasa.	3

In the above excerpt, the phrase “A chartered private jet” is translated into “Sebuah jet pribadi sewaan” in GT. This clearly shows that GT fails to localize the source text according to the Indonesian culture. In OT, a better translation is provided with the change in form and shorter sentence. The phrase is culturally translated into “Dengan Jet pribadi cateran” and the word “is” in the source text does not need to be translated. This is because this text is for marketing purposes where the concept of AIDA (Attention-Grabbing, Interest Rousing, Desire, and Action) is required. Therefore, the second phrase “is an entirely different experience” is translated into “adalah pengalaman yang sama sekali berbeda”. The distinct feature of this is that the word “is” is translated into “adalah”. This is too rigid. In OT, the pronoun “anda” is added to give the readers advice to use the service. This concept matches the AIDA principle mentioned above.

Meanwhile, in the google translated version, there is no personal pronoun. In the OT version, “anda (you)” personal pronoun is added. The investigation has shown that the second-person pronoun “you” is almost ubiquitous in advertising, which is “most divergent from the uses of other genres” (Cook, 2001). This means that using second-person reference is contributive to satisfying people’s social/love needs, esteem needs, and safety needs (Chui & Zao, 2013). They continue that the use of second-person references can enhance their memorization of the advertised product or service better.

Table 3. Sentence Pair No. 2

Source Text (ST)	Original Translation (OT)	Google Translation (GT)	Readability level
The services of Aviav TM (Cofrance SARL) have been tailored to take care of our customers’ convenience and comfort, and we have spared no effort to make your trip as efficient, fast, and agreeable as possible.	Kami merancang layanan Aviav TM (Cofrance SARL) sedemikian rupa untuk menjaga kenyamanan dan kepuasan pelanggan kami, dan kami pastikan perjalanan Anda efisien, cepat, dan menyenangkan.	Layanan Aviav TM (Cofrance SARL) telah disesuaikan untuk menjaga kemudahan dan kenyamanan pelanggan kami, dan kami tidak berusaha keras untuk membuat perjalanan Anda seefisien, secepat dan sesenjam mungkin.	2

The above sentence has a less readable quality. The clause “The services of Aviav TM (Cofrance SARL) have been tailored” is translated into “Layanan Aviav TM (Cofrance SARL) telah disesuaikan” as in the structure in the source text. In OT, a more acceptable translation is given as in “Kami merancang layanan Aviav TM (Cofrance SARL) sedemikian rupa” where the subject pronoun “Kami”

is added to ensure the services are provided by the company and make the customer feel assured of the service. The phrase “have been tailored” is translated culturally into “merancang sedemikian rupa” which enlivens the target text. The clause “we have spared no effort” is translated as “kami tidak berusaha keras” in the GT version. In a Cambridge online dictionary, the phrase “spare no effort” means “to achieve something by working as hard as possible or spending as much money as is necessary”. Thus the OT version “kami pastikan” sounds more acceptable in conveying the message of the source text.

Table 4. Sentence Pair No. 3

Source Text (ST)	Original (OT)	Translation	Google Translate (GT)	Readability level
Once you are aware of all details of a trip by a private business jet, all you will need to do is enjoy a flawless flight.	Setelah Anda yakin tentang semua detail perjalanan dengan jet bisnis pribadi, sekarang saatnya Anda menikmati penerbangan sempurna anda.		Setelah Anda mengetahui semua detail perjalanan dengan jet bisnis pribadi, yang perlu Anda lakukan hanyalah menikmati penerbangan tanpa cela ..	2

The above google translated text has a less readable scale. This is can be seen from the above excerpt where the translation of “aware” in the above sentence is “mengetahui” in the GT version. This translation sounds unnatural as the word “mengetahui” has the literal meaning of “to find out” in English. A closer equivalent would be “yakin” or “certain” in English as translated in the OT version. Another unnatural translation or literal translation is “all you will need to do is enjoy a flawless flight.” which was translated as “yang perlu Anda lakukan hanyalah menikmati penerbangan tanpa cela”. This translation especially the phrase “tanpa cela” has a lexically misleading translation. At a sentence level, the GT version implies as if the reader must do something as instructed. As it orders someone to enjoy a particular situation. A more personal approach translation is given in the OT with “sekarang saatnya Anda menikmati penerbangan sempurna anda”, where it persuades the target consumer to have the time to enjoy his/her flight. In a back-translated version, it would be “now is the time for you to enjoy a smooth flight”.

Table 5. Sentence Pair No. 4

Source Text (ST)	Original (OT)	Translation	Google Translate (GT)	Readability level
Our team will e-mail you the flight plan with all details required for your travel, including the itinerary, schedule, directions to the airport, and even the aircraft registration numbers and the pilots’ names.	Tim kami akan mengirim Anda email berisi rencana penerbangan dengan semua informasi detail terkait perjalanan Anda, termasuk rencana perjalanan, jadwal perjalanan, arah jalan ke bandara, dan bahkan nomor registrasi pesawat dan nama pilot pesawat		Tim kami akan mengirimkan email rencana penerbangan dengan semua detail yang diperlukan untuk perjalanan Anda, termasuk itinerary, jadwal, petunjuk arah ke bandara, dan bahkan nomor registrasi pesawat dan nama pilot.	3

yang Anda tumpangi

The above data shows that the GT version has a high readability level in this case. Despite that, a literal translation occurs at the “itinerary” which was left untranslated in the GT version. In the Indonesian online dictionary, the word “itinerary” is not yet adopted. Thus, it cannot be used and instead should be translated as “rencana perjalanan” in Indonesian. Despite the high readability level in this particular text, a translation strategy such as addition can be accordingly applied to make the target text sound more natural.

Table 6. Sentence Pair No. 5

Source Text (ST)	Original Translation (OT)	Google Translate (GT)	Readability level
Feel free to contact the staff of Cofrance SARL for details of the procedures required to make your travel seamless.	Jangan ragu untuk menghubungi staf Cofrance SARL untuk rincian prosedur yang diperlukan agar perjalanan Anda lancar.	Jangan sungkan untuk menghubungi kami di Cofrance SARL untuk mendapatkan rincian prosedur yang harus dilewati agar perjalanan Anda lancar tanpa hambatan.	3

The GT version for the above source text does not make so much incomprehension in terms of meaning as the readability level is three which means it is readable enough. Nonetheless, the phrase “jangan ragu” in Indonesian does not spike interest from the target consumer. The OT version gives a more culturally adapted phrase “jangan sungkan”. This phrase is more local and is a lot softer for Indonesians to hear. While the object noun “the staff” which was translated as “staf” sounds more rigid compared to the OT version “kami” (us). In an advertisement, it is better to use first-person pronouns than the third-person pronouns, here in the Google Translated version is “our staff”. The use of pronouns is “one of the most distinctive features of advertising” (Cook, 2001).

Table 7. Sentence Pair No. 6

Source Text (ST)	Original Translation (OT)	Google Translate (GT)	Readability level
A passenger list makes it possible to send immigration information in advance and to avoid checks at the airport for internal flights within France and the Schengen Area thus simplifying administrative procedures and saving passengers' time.	Dengan adanya daftar penumpang, maka informasi imigrasi dapat disampaikan terlebih dahulu dan menghindari pemeriksaan di bandara untuk penerbangan domestik di Prancis dan Wilayah Schengen sehingga prosedur administrasi tidak bertele tele dan waktu penumpang lebih efisien.	Daftar penumpang memungkinkan untuk mengirimkan informasi imigrasi terlebih dahulu dan untuk menghindari pemeriksaan di bandara untuk penerbangan internal di Perancis dan Wilayah Schengen sehingga menyederhanakan prosedur administrasi dan menghemat waktu penumpang.	2

The above excerpt shows that the sentence structure in the GT version follows exactly the sentence structure in the source text. Another distinct literal translation is the phrase “internal flights” which was translated in the GT as “penerbangan internal”. There is no such thing as a “penerbangan internal” term in Indonesia. The correct translation as in the OT version is “penerbangan domestik”. Another literal translation in the GT version of the above text is the phrase “simplifying administrative procedures and saving passengers’ time” which was translated as “menyederhanakan prosedur administrasi dan menghemat waktu penumpang”. A good free translation is provided in the OT version which was “prosedur administrasi tidak bertele-tele dan waktu penumpang lebih efisien”. In this context, the phrase “bertele-tele” is more stylistic and colloquial for Indonesian readers.

Table 8. Sentence Pair No. 7

Source Text (ST)	Original Translation (OT)	Google Translate (GT)	Readability level
You will be requested by authorities to present your identity document at the airport in international travel by private aircraft.	Pihak otoritas bandara akan meminta Anda menunjukkan dokumen identitas Anda di bandara ketika Anda melakukan perjalanan internasional dengan pesawat pribadi.	Anda akan diminta oleh pihak berwenang untuk menunjukkan dokumen identitas Anda di bandara dalam perjalanan internasional dengan pesawat pribadi.	3

In GT, the structure follows exactly the source text with the second personal pronoun “you” acting as the subject of the sentence. While in the OT version, the pronoun “you” is placed as the object of the first clause. We believe that placing the second personal pronoun as the object would deliver a softer way to seduce prospective customers. Another literal translation occurs in the translation “authorities” which was translated as “pihak berwenang”. This translation could mean ambiguous, since “pihak berwenang” in the Indonesian context could mean “police officers” and other officials. In the OT version, it was translated as “pihak otoritas bandara” which is more acceptable as it is aligned with the context in which the situation is in an airport. In localization, an adaptation strategy that is by culturally transferring the meaning of website content is recommended to fulfill the expectations of local users (Esselink, 2000). In addition, stylistic effects in the translation are required in website localization. Stylistic effects refer to the voice, order of the words, metaphors, and pitch of the text (Akbari, 2014).

4. CONCLUSION

In our study, it is evident that GT failed to do two things: firstly, about adaptation strategy, and secondly about stylistic effects. Above all, the post-editing stage of Machine Translation is of great importance to conveying the near essence of the source language. To this end, human assistance is an indispensable part of Machine Translation to transfer and interpret the source language text accurately. Since website localization is a type of marketing strategy for a company, post-editing should be done using a persuasive and alluring approach in translation. This study, however, is limited to the texts in a flight charterer website based in Russia, therefore, the content does not fully represent the accuracy of translation of other types of websites in general. Future research may touch on a wider scope of study such as different types of websites with different types of texts in them to find more homogenous findings to the use of machine translation in website localization.

REFERENCES

- Al Mahasees, Z. (2020). Diachronic evaluation of Google Translate, Microsoft Translator, and Sakhr in English-Arabic translation. Unpublished Master's Thesis, the University of Western Australia, Australia.
- Aghayi, M.B. & Azer, H.S. (2015). An Evaluation of Output Quality of Machine Translation (Padideh Software vs. Google Translate). *Advances in Language and Literary Studies*. Vol. 6 No. 4.
- Aiken, M. and Balan, S. (2011). An Analysis of Google Translate Accuracy. *Translation Journal*, vol. 16 (2).
- Akbari, (2014). An Overall Perspective of Machine Translation with its Shortcomings. *International Journal of Education & Literacy Studies*. Vol. 2 No. 1.
- Aziz, W., Sousa, S.C.M., & Specia, L. (2012). PET: A tool for postediting and assessing machine translation. The Eighth International Conference on Language Resources and Evaluation, Istanbul, Turkey.
- Bozorgian, M., & Azadmanesh, N. (2015). A survey on the subject-verb agreement in Google machine translation. *International Journal of Research Studies in Educational Technology*, 4(1).
- Chui, Y. & Zhao, Y. (2014). The Use of Second-Person Reference in Advertisement Translation concerning Translation between Chinese and English. *International Journal of Society, Culture and Language*.
- Cook, G. (2001). *The discourse of advertising* (second edition). London: Routledge.
- Elliot, D. (2006). *Corpus-Based Machine Translation Evaluation Via Automated Error Detection In Output Texts*. Unpublished Doctoral Dissertation, University of Leeds.
- Esselink, B. (2000). *A Practical Guide to Localization*. Amsterdam/Philadelphia: John Benjamins.
- Hampshire, S. and Salvia, C., S., (2010). Translation and the internet: evaluating the quality of free online machine translators. *Quaderns: revista de traducció* 17:197-209.
- Jolicoeur, L., & Amini, S. B. (2015). Translation from Arabic into Persian and Vice Versa, from the Seventh to the Twelfth Century. In *2nd Conference on Interdisciplinary Approaches to Language Teaching, Literature, and Translation Studies*.
- Karami, O. (2014). A brief view of the Google Translate machine. Paper presented at the meeting of the 2014 Seminar in Artificial Intelligence on Natural Language, German.
- Kelly, N., & Bruen, J. (2015). Translation as a pedagogical tool in the foreign language classroom: A qualitative study of attitudes and behaviors. *Language Teaching Research*, 19(2), 150-168.
- Komeili, Z., Farughi, J., & Rahimi, A. (2011). An investigation of the translation problems incurred by English-to-Persian machine translations: Padideh, Pars, and Google software. *Science Direct*, 28, 1079-1082. <http://dx.doi.org/10.1016/j.sbspro.2011.11.195>.
- Malik, P., Gupta, A., Baghel, A. (2013). Key Issues in Machine Translation Evaluation of English-Indian Languages. *International Journal of Engineering Research & Technology (IJERT)*. Vol. 2 Issue 10,
- Nababan, M. & Nuraeni, A. (2012). Pengembangan model penilaian kualitas terjemahan. *Kajian Linguistik dan Sastra*. 24 (1)
- Stapleton, P. & Kin, B., L., K. (2019). Assessing the accuracy and teachers' impressions of Google Translate: A study of primary L2 writers in Hong Kong. *English for Specific Purposes*. 56. '18-34
- Sugiyono. (2006). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Bandung: Alfabeta.
- Vidhayasai, T., Keyuravong, S. & Bunsom, T. (2015) Investigating the use of Google Translate in "Terms and Conditions" in an airline's official website: Errors and implications. *PASAA: Journal of Language Teaching and Learning in Thailand*, 49, 137-169.

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