



# The Translation of Technical Terms of Disciplinary Texts Using GT: Analysis of Translation Techniques

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# INTRODUCTION

The impact of technology advancement on translation

- ✓ Improved Accuracy and Fluency (Popel et al., 2020)
- ✓ Accessibility (Steigerwald et al., 2022)
- ✓ Continuous Learning and Improvement (Steigerwald et al., 2022)

The purpose of the study

- ✓ To investigate what types of translation techniques were applied by Google Translate (GT) in concordance with an MT prediction in translating technical terms of disciplinary texts.

# LITERATURE REVIEW

- GT is reliable to translate term-document matrices (Li et al., 2014)
- The analysis of the translation of students' first language essays into English found out that the translation engine was far from able to produce error-free text. However, judging in relation to international testing standards, the level of accuracy is approaching the minimum needed for university admission at many institutions (Groves & Mundt, 2015)
- The translation of abstracts from Thai into English revealed overall comprehensibility and usability were both at a moderate level. That means the quality of the abstracts translated by GT may not meet the language requirements needed for academic writing (Tongpoon-Patanasorn, 2020)
- Academic text translation of GT showed most of the translations are built in similar forms to those of the Source Language. In terms of meaning, the messages conveyed seem to be fairly accurate even though inaccuracy is still found (Winiharti et al., 2021)
- In English – Bahasa Indonesia translation, Google Translate, especially in translating specialized language in mechanical engineering terms, was accurate for word translation, but inaccurate for phrases (Farahsani et al., 2021)

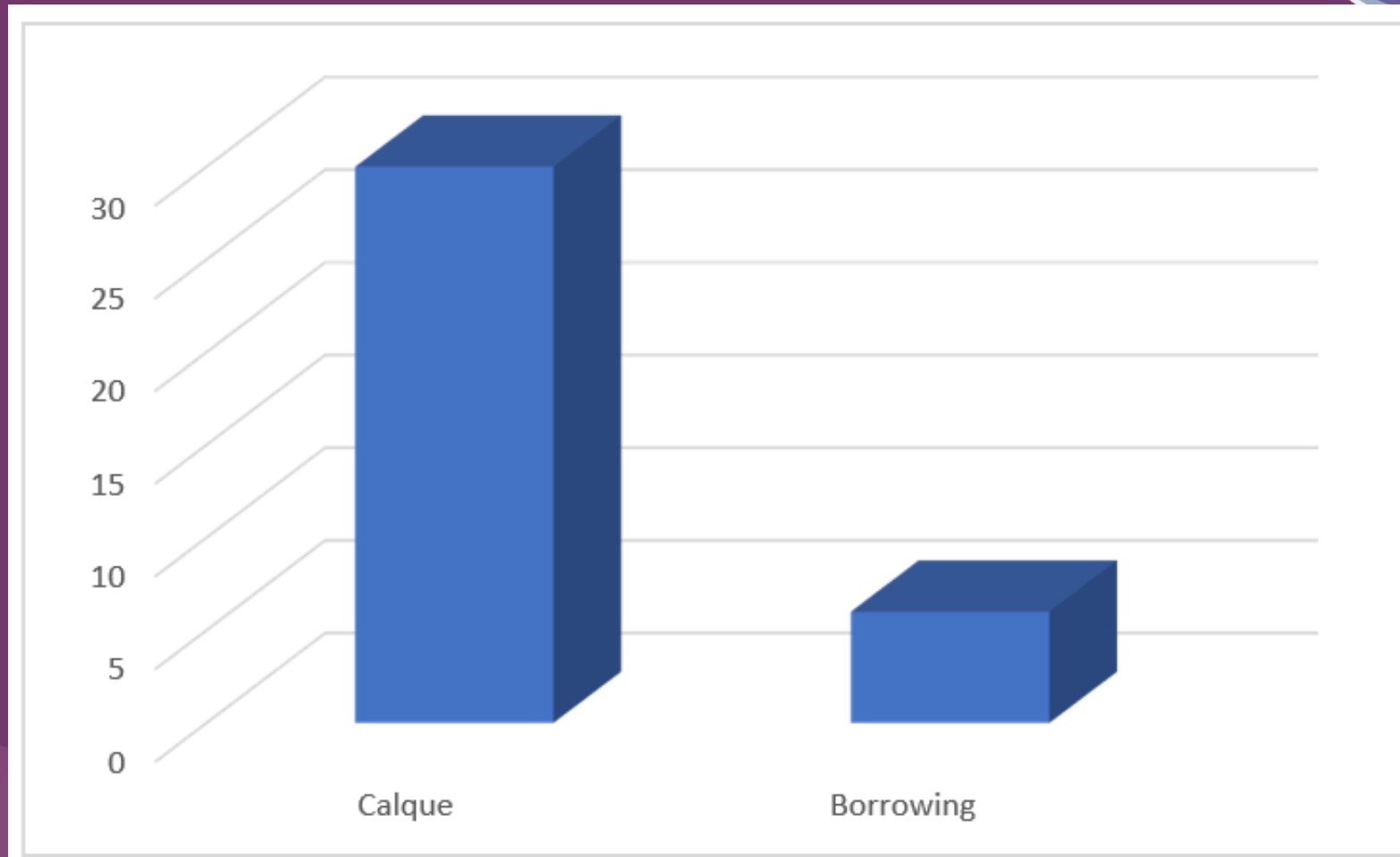
# METHOD

Method: Qualitative descriptive (Creswell & Creswell, 2018)

Data source: The translation of a textbook entitled “Fundamentals of Digital Logic with VHDL Design” which published in 2023.

Focus of the study: The translation techniques used by GT in translating the technical terms found in the book.

# FINDING AND DISCUSSION



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NO	SOURCE LANGUAGE (SL)	TARGET LANGUAGE (TL)
1	logic circuit	rangkaian logika
2	logic design	desain logika
3	logic device	perangkat logika
4	logic gate	gerbang logika
5	logic value	nilai logika
6	single chip	satu chip
7	standard chips	chips standard
8	custom chip	chip khusus
9	silicon chip	chip silikon
10	digital hardware	perangkat keras digital

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# CONCLUSION

1. GT tends to use two types of translation techniques of Molina and Albir.
2. The techniques are Calque and Borrowing.
3. These reveal that GT tend to translate the technical terms which have had equivalent words.
4. It means that the translation has been acceptable.
5. This finding is in line with what found by Farahsani et al. (2021)



# REFERENCES

Farahsani, Y., Rini, I. P., & Jaya, P. H. (2021). Google Translate Accuracy in Translating Specialized Language From English to Bahasa Indonesia: A Case Study on Mechanical Engineering Terminology. Proceedings of the 4th International Conference on Sustainable Innovation 2020–Social, Humanity, and Education (ICoSIHESS 2020). 4th International Conference on Sustainable Innovation 2020–Social, Humanity, and Education (ICoSIHESS 2020), Yogyakarta, Indonesia. <https://doi.org/10.2991/assehr.k.210120.156>

Groves, M., & Mundt, K. (2015). Friend or foe? Google Translate in language for academic purposes. *English for Specific Purposes*, 37, 112–121. <https://doi.org/10.1016/j.esp.2014.09.001>

Li, H., Graesser, A. C., & Cai, Z. (2014). Comparison of Google Translation with Human Translation. Proceedings of the Twenty-Seventh International Florida Artificial Intelligence Research Society Conference, 190–195.

Steigerwald, E., Ramírez-Castañeda, V., Brandt, D. Y. C., Báldi, A., Shapiro, J. T., Bowker, L., & Tarvin, R. D. (2022). Overcoming Language Barriers in Academia: Machine Translation Tools and a Vision for a Multilingual Future. *BioScience*, 72(10), 988–998. <https://doi.org/10.1093/biosci/biac062>

Tongpoon-Patanasorn, A. (2020). Google Translate and Translation Quality: A Case of Translating Academic Abstracts from Thai to English. *PASAA*, 60(1), 134–163. <https://doi.org/10.58837/CHULA.PASAA.60.1.5>

Winiharti, M., S, S., & Sudana, D. (2021). The English Google translation of Indonesian lecturer's academic writing: A preliminary study. *Journal of Language and Linguistic Studies*, 17(2), 706–719. <https://doi.org/10.52462/jlls.49>



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