The Adoption of an AI Translation Software to Reduce Lexico-Grammatical Errors at Higher Education

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Abstract. *This research study is to explore the perception of students majoring in English who are writing their thesis regarding the accuracy of Google Translate in reducing lexico-grammar errors among students at private universities in Jember, Indonesia. There were (N = 6) student who were willing to participate in this study. Qualitative method and semi structured interviews were conducted to explore their feeling in depth with the students who were the respondents. The results showed that Google Translate could not reduce grammar errors, there were still some errors in student thesis writing. Students need to check the translation result and correct them. Google Translate help students revise their writing to produce good writing that is free from grammatical errors.*

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INTRODUCTION

Google Translate is one of the AI translation tools. It is very familiar in Indonesia, especially among students majoring in English. Many EFL learners admit to using Google Translate consistently in language learning, even in academic settings AI Translation tools, one of them Google translate, is not widely used, and EFL teachers generally have a negative attitude towards the use of Google Translate in the classroom (Briggs, 2018). Primarily due to doubts regarding its ability to accurately translate the source text into the target language (Lee 2019). Google translate has improved the quality of translation with the launch of the Neural Machine Translation System labeled Google Neural Machine Translation (GNMT). The GNMT system, described by King (2019), "takes in data, codes it, puts it into some context, and then re-codes it for output" and incorporates an algorithm

similar to human neurons. Compared to the previous system, this improvement resulted in a 60% reduction in translation errors (Ducar & Schocket, 2018, pp.1e16). According to Valijarvi and Tarsoly (2019), it "provides quick hands-on solutions" (p. 62); in the direction of successful translations, the incorporation of cutting-edge technologies has made GT a multi-functional tool. To address the tool's advantages and disadvantages in the L2 classroom, they also recommend that educators investigate the potential benefits of GT.

GT has been a contentious issue regarding whether this tool can be applied in language learning. This translation tool's output has been the subject of much discussion among researchers. For instance, Briggs (2018) discovered that the output's accuracy surpassed of eighty upper-year Korean-speaking university students who worked together to translate Korean conversation into English. Tsai (2019) found that the GT English texts demonstrated multiple elements of significantly higher writing quality compared to the students' SW papers, including more words, fewer spelling and grammar errors, and fewer errors per word. Lee (2020) English majors at a Korean institution were able to write better in English in terms of vocabulary, syntax, and phrases as a result of Google Translate. It improved their revision writing techniques as well. According to Tsai (2020), GT texts performed noticeably better when it came to providing more rich material, using more complex language, and making fewer spelling and grammar mistakes.

Previous research has generally reported a significant increase after using google translate, but there is no research that comprehensively discusses whether Google translate can reduce Lexico – Grammatical Errors at the university level. In addition, research on this issue is still little done, especially in Indonesia. Therefore, the researcher raises this issue in the thesis. The research goal of this study is to exploring students' perceptions about whether Google translate can reduce lexico – grammatical errors on students who are involved in English writing and translation activities in higher education. This present study aims to investigate the following question: What is the student's perception that utilizing Google Translate can help with grammatical errors in writing?

METHODS

The study used constructivism paradigm or social constructivism. It is typically regarded as a method for conducting qualitative research. There were 25 final-semester students majoring in English at a private university in Jember, Indonesia, while the respondents totaled 6 students, consisting of 2 male students and 4 female students. The technique of taking respondents is using purposive sampling. The instrument in this study used semi-structured interviews. According to Creswell (2018), data analysis in qualitative research is as follows:

1. Arrange and get the data ready for examination. This will require the transcription of interviews, the optical scanning of materials, the typing of field notes, the cataloging of all visual materials, and the

2. sorting and grouping of data according to the sources of the information
3. Go over or read every bit of information. You can have a general knowledge of the data and have an opportunity to think about its overall significance in this initial stage. What statements are participants making in general? What cadence are the thoughts taking? What impression do you have of the general application, dependability, and depth of the information? At this stage, qualitative researchers can start recording broad conclusions about the data or annotating observational field notes or transcript margins. For visual data, a concept notebook might begin to take shape.
4. Get all of the data coding. According to Rossman and Rallis (2012), coding is the process of organizing the data by placing text or image segments in brackets and adding a word to the margins to symbolize each group. It comprises collecting textual or visual information obtained during data collection, classifying sentences (or paragraphs) or images, and assigning a term—often one derived from the participant's actual language—to each category.
5. Use the coding process to produce categories or topics that need to be examined, as well as descriptions of locations or individuals. Giving specific details about the people, places, or events in the scene is known as description. These descriptions can be coded by researchers. When creating in-depth descriptions for case studies, ethnographies, and narrative research projects, this analysis is helpful. further creates a limited number of themes or categories using coding, maybe five to seven themes for research projects. These concepts come to light as the central idea. The findings part of a qualitative study (or the findings section of a dissertation or thesis) sometimes uses the findings as headings. They have to give a variety of viewpoints from different people, backed up by particular quotations and proof.
6. Take into account beforehand how the description and themes will be represented in the qualitative narrative. The most popular approach is to write a narrative piece containing the analysis's findings. This could be a discussion that goes over a chronology of events or offers a comprehensive analysis of several topics. (full of subthemes, specific examples, people's points of view, and quotes) or a discussion on similar topics. Many qualitative researchers use figures, tables, or graphics to enhance their discussions. They present a process model, a description, or a drawing of the particular research site (as in ethnographies).
7. Data about each participant in a table (as in case studies and ethnographies).The final stage of data analysis in qualitative research is to interpret the results or findings. The best way to put this viewpoint is to ask

"What were the lessons learned?" (Guba & Lincoln, 1985). These conclusions might be the researcher's personal interpretation, framed in the understanding that the study's subject offers a distinct viewpoint shaped by their own background, experiences, and culture. It could also have a meaning that is deduced by comparing the findings to specifics found in ideas or literature. As a result, authors suggest that the information either confirms or refutes previous understanding. Furthermore, it has the ability to suggest further questions that ought to be asked—questions that the researcher had not considered before starting the study but were spurred by the data and analysis. Wolcott (1994) states that ethnographers may pose more questions at the end of a research. Furthermore, the questioning tactic is used in transformative approaches to qualitative research. Additionally, by applying a theoretical framework to analyze their data, qualitative researchers can create agendas for reform and change. Scholars could talk about how the narrative results will be assessed in light of existing theories and the corpus of general study on the topic.

FINDINGS

Student interviews provided the study's data. Since the goal of the study is to understand and describe how final semester students perceive the advantages of utilizing Google Translate to write their theses, particularly in terms of reducing grammar errors. The following are interview questions and their results: (1). Do you use Google Translate when writing your thesis? (2). How often do you use Google Translate when writing your thesis? (3). Why do you use Google Translate to write your thesis? (4). How do you use Google Translate when writing your thesis? Do you translate simple sentences, compound sentences, complex sentences, or compound-complex sentences? Give me an example sentence! (5). Do you use standard Indonesian when translating using Google Translate? (6). In your opinion, how accurate is the Google Translate translation? (7). How is your supervisor's response to the results of your writing with the help of Google Translate? Does your lecturer still find grammatical errors?

From interview question point 1, namely when students were asked about the use of Google Translate in writing their thesis. All respondents answered that they used Google Translate to write their thesis. Students often use Google Translate in writing their thesis for the reason that it makes it easier to find vocabulary and to help construct sentences when confused about choosing diction. Students translate simple, compound, complex, and compound sentences when writing their thesis. When writing their thesis, they use standard Indonesian first before translating it into English in order to minimize errors in the translation results.

90% of the students who became respondents stated that the results of the Google Translate translation were accurate; they stated that the accuracy was around 80% and

above, with notes that they had to use standard Indonesian before translating into English. Meanwhile, 10% of the students who were respondents said that the accuracy of the Google Translate translation results was 60%. The accuracy value of the Google Translate translation results was obtained by students when the supervisor gave a response to their thesis writing.

"The Google Translate translation results are 90% accurate, but the supervisor still finds grammar errors that must be corrected again."(student 1 and 2, interview, 19 juni 2023).

"Accurate, but not all around. The supervisor still finds 2 or 3 words that do not fit in the one grammar error sentence."(Student 3, interview, 19 juni 2023).

"It's not really accurate, sometimes Google translate miss the translator. Then the lecturers ask me to paraphrase the sentence."(Student 4, interview, 19 juni 2023).

"I think the use of Google Translate is only 80% accurate. The supervisor still found some words that were not quite right. So I have to go back to check the translation results."(Student 5, interview,19 juni 2023).

"The accuracy of the Google Translate translation results is 60%, and the supervisor still finds grammatical inaccuracies."(Student 6, interview, 19 juni 2023)

DISCUSSION

In this section, the results of the data collected and analysis are discussed to be described students' perceptions of Google Translate in reducing grammatical errors when writing thesis. Description of the data collected from the results of student interviews. The research findings show that Google translate cannot reduce grammatical errors. This is inversely proportional to previous studies which stated that Google translate can reduce grammar errors. For example, Tsai (2019) discovered that GT English texts offered multiple components of significantly superior writing quality than students' SW texts, including more words, fewer spelling and grammatical errors, and fewer errors per word. Google Translate aids English majors in Korean colleges in developing their vocabulary, grammar, and expressions in written English, according to Lee (2020) it helped them with their revision writing strategy. The writing performance of Tsai (2020) GT text is noticeably superior in terms of expressing more material, employing a more complex vocabulary, and committing fewer spelling and grammatical mistakes.

This study uses a qualitative interview method to find answers to research questions. This is done so that researchers find definite results about how Google translate can reduce grammatical errors. The results of the research are the direct opinions of students who use Google translate when writing their thesis. While for the previous study mostly used a mix of methods, namely interviews and writing tests. This is a factor that causes differences in research results which have been mentioned in the previous paragraph. Previous study found that Google translate can reduce grammar errors. These findings are the result of a student's written test where the student's writing results experience significant changes after using Google Translate. When compared with this

research it is clear that the results are different because according to students, Google translate cannot reduce grammatical

errors. Students need to double check their writing and correct it when using Google translates. In the previous study's writing test, students were asked to translate their L1 writing into L2 without the help of Google translate and then correcting their L2 writing using the Google translates for comparison. Clearly, this can reduce grammar errors because students recheck and revise their writing with the help of Google translate.

CONCLUSIONS

This study aims to explore students' perceptions about whether Google translate can reduce lexico-grammar errors in students who are involved in English writing and translating activities at private universities in Jember, Indonesia. To find out students' perceptions about this, the researcher used a research instrument in the form of interviews. The results show that Google translate cannot reduce grammatical errors 100%, students need to check the translation results and correct them**.** Google translate assist students in revising their writing to produce good writing that is free from grammar errors.

REFERENCES

Aisyah Riski R. 2021. *Students' Perceptions Of Google Translate As A Media For Translating English Material*. Skripsi Tesis. Faculty of Teacher Training and Education. Muhammadiyah University of Makassar.

Bailey, D. R. (2019). Conceptualization of second language writing strategies and their relation to student characteristics. *Journal of ASIA TEFL*, 16(1), 135–148. https://doi.org/10.18823/asiatef.2019.11.1. 9.135

Beiler, I. R., & Dewilde, J. (2020). Translation as translingual writing practice in English as an additional language. *The Modern Language Journal*, 104(3), 533–549. https://doi.org/10.1111/modl.12660.

Briggs, N. (2018). Neural machine translation tools in the language learning classroom: Students' use, perceptions, and analyses. *JALT CALL Journal*, 14(1), 3e24. https://doi.org/10.29140/jaltcall.v14n1.221.

Cancino, M., & Panes, J. (2021). The impact of Google Translate on L2 writing quality measures: Evidence from Chilean EFL high school learners. *System,* Vol. *98.* DOI: 10.1016/j.system.2021.102464.

Chandra, S. O., & Yuyun, I. (2018). The use of Google Translate in EFL essay writing. *LLT Journal: A Journal on Language and Language Teaching,* 21(2), 228-238.

Creswell, J.W. (2018). *Research Design Qualitative, Quantitative and Mixed Method Approaches.* Los Angeles: Sage.

Ducar, C., & Schocket, D. H. (2018). *Machine translation and the L2 classroom: Pedagogical solutions for making peace with Google translate*. American Council on the Teaching of Foreign Languages. https://doi.org/10.1111/flan.12366.

Fajrina, D., Everatt, J., & Sadeghi, A. (2021). Writing Strategies Used by Indonesian EFL Students with Different English Proficiency. *Language Teaching Research Quarterly,* Vol. 21, 1–1D.

Fredholm, K. (2019). Effects of Google translate on lexical diversity: Vocabulary development among Learners of Spanish as a Foreign Language. *Revista Nebrija*, 13(26), 98-117.

King, K. (2019). Can Google translate be taught to translate literature? A case for humanists to collaborate in the future of machine translation. *Translation Review, 105(1), 76e92*. https://doi.org/10.1080/07374836.2019.1673268.

Lee, S. M., & Briggs, N. (2020). Effects of using machine translation to mediate the revision process of Korean university students' academic writing. *Cambridge University Press,* doi: 10.1017/S0958344020000191.

Lee, S. M. (2020). The impact of using machine translation on EFL students' writing. *Computer Assisted Language Learning*, 33(3), 157–175. doi:10.1080/09588221.2018. 1553186.

Maharany, H. 2019. *Students' Strategies in Translating Narrative Text*. Skripsi Tesis. Tulungagung: IAIN Tulungagung.

Maulidiyah, F. (2018). To use or not to use google translate. Jurnal Linguistik Terapan, 8(2), 1-6.

Medvedev, G. (2016). Google translate in teaching English. *Journal of Teaching English for Specific and Academic Purposes*, 4(1), 181-193.

Tsai, S.-C. (2020). Chinese students' perceptions of using Google Translate as a translingual CALL tool in EFL writing. *Computer Assisted Language Learning*, doi: 10.1080/09588221.2020.1799412.

Wirantaka, A., & Fijanah, M, S. (2021). Effective Use of Google Translate in Writing. *Advances in Social Science, Education and Humanities Research,* Vol. *626.*