The Use of Machine Translation Tools in EFL Students' Writing

Firima Zona Tanjung[a,1,*], Woro Kusmaryani[b,2]

[a,b] *Program Studi Pendidikan Bahasa Inggris, Fakultas Ilmu Pendidikan, Universitas Borneo Tarakan,*
Jalan Amal Lama No.1, Tarakan 77115, Indonesia
[1] *english_zone@borneo.ac.id* *; [2] *worokusmaryani@borneo.ac.id*

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ABSTRACT

Despite the increasing prominence of machine translation (MT) tools in academic settings, few studies have explored how EFL students balance the use of translation techniques with digital assistance while also enhancing their writing skills. This research investigates how fourth-semester EFL students translate and articulate their views on utilizing MT tools to support academic writing. The fourth semester students enrolling translation course in an undergraduate program in a public university in Indonesia participated in this mixed method research. Data were gathered from documents, questionnaire, and interview which then analyzed with qualitative method and descriptive statistical analysis. The findings reveal that borrowing and literal translation were the most frequently used techniques, followed by transposition and adaptation. It indicates students' reliance on direct linguistic transfer and their emerging grammatical flexibility and cultural awareness. Although the students acknowledged the limitations of MT tools and the need for critical post-editing, they had positive attitudes toward MT tools usage. The study concludes that students are in a transitional phase of translation competence. Hence, pedagogical interventions—emphasizing writing conventions, post-editing skills, and MT literacy including etiquette—are highly required for endorsing the development of both translation and academic writing skills in EFL academic settings.
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I. Introduction

One of the challenging courses offered to undergraduate students in English Education Department curriculum is Translation, whether it is viewed from its diverse purposes, instructional approaches, cultural understanding, and number of credits [1], [2]. Additionally, translation is not an automatic process. It requires a lot of practices and experiences with a variety of text genre. Particularly, the engaging activities of translating texts cannot be detached from the use of technology in this society 5.0 era.

Nowadays, the students are more familiar with machine translation (MT) tools than with physical dictionaries, primarily because these tools offer immediate feedback that enables them to complete tasks more efficiently [3]. Particularly, this growing reliance reflects the increasing demand for technological integration through MT tools in English Language Teaching (ELT). The fact that students receive rapid response further reinforces their preference to use the tools [3] in academic tasks. To put it briefly, MT tools have become essential for supporting translation activities and have gained significant prominence in ELT contexts in recent years.

The rise of globalization and intercultural communication has led to a growing demand for effective tools to help non-native English speakers improve their language proficiency. One of the main benefits of machine translation tools is that their ability to provide instant access to accurate translations of English texts. This can be an invaluable resource for EFL learners who struggle with understanding complex vocabulary and grammar structures. Additionally, machine translation technology can also help students to develop their writing skills by providing suggestions for more

appropriate and natural phrasing [4]. Thus, giving pupils immediate access to precise translations of English literature is one of the key advantages of machine translation techniques. This can be a very helpful tool for EFL students who have trouble comprehending difficult grammar and vocabulary. Furthermore, by suggesting more acceptable and natural language, machine translation technology can assist students in improving their writing abilities [4].

The ability of machine translation tools to aid in bridging the cultural divide between native and non-native English speakers is another benefit of implementing them in English Language Teaching. Through customized translations aimed at meeting the unique requirements of English as a Foreign Language (EFL) students, these resources can support cross-cultural dialogue and mutual comprehension. Additionally, by providing more glossaries for a diverse text production viewed from its quantity and quality, the use of machine translation tools enables academia, including the collaboration between researchers, linguists, and tool developers, to get actively involved in improving the translated texts [5].

Another advantage of using machine translation tools in ELT is that its potential to help bridging the cultural gap that often exists between native and non-native English speakers. By providing translations that are tailored to the specific needs of English as Foreign Language (EFL) learners, these tools can help to facilitate communication and understanding between people from different cultural backgrounds. Moreover, the use of machine translation tools enables academia, including the collaboration between researchers, linguists, and tool developers, to get involved actively in improving the translated texts through the activities of providing more glossaries [5] for a diverse text production viewed from its quantity and quality.

There are, however, also some potential risks associated with the use of machine translation technology in the ELT context. For example, learners may become too reliant on these tools and fail to develop their own language skills [6]. Additionally, machine translations may not always be entirely accurate or appropriate, which could lead to misunderstandings or even cultural faux pas [7]–[9]. The potential and risk of machine translation tools use have been explored by many researchers. Mahardika [10] reviewed that the use of machine translation tools promotes students' scaffolding process in learning new vocabulary, grammatical structures, and other linguistic aspects, but she emphasized the significance of English mastery and the development of students' awareness in evaluating the translated text. Next, Bangun and Mustafa [4] had revealed the positive and negative impact of translation tools for students' writing skills. This finding, particularly, challenges the lecturers to develop students' awareness of evaluating the text resulted from translation tools or to do check and re-check the text [9] in the post-editing machine translation [2].

Despite the aforementioned significant research studies of machine translation tools for language skills improvement and students' awareness of translated text evaluation, this present research is intended to fill the research gap of students' voice on their practical experiences of using machine translation tools for writing purposes, mainly in Translation course, by proposing a research title "The Use of Machine Translation Tools on EFL Students' Writing" and the following research questions:

1. What are the translation techniques used by the fourth semester students in Translation class of English Education Department of Borneo University Tarakan?
2. How do they perceive the use of machine translation tools for writing purposes in Translation class?

II. Method

The present research has two main objectives: 1) to determine what translation techniques used by the fourth semester students in Translation class of English Education Department of Borneo University Tarakan; and 2) to describe the fourth semester students' perception about the use of machine translation tools for writing purposes in Translation class. Hence, this research focused on a select of group of students utilizing machine translation tools for writing purposes in Translation course. Moreover, it explored their translation techniques and pinpointed their voice of text translation process using machine translation tools. Given the complexity of the research focus, the researchers employed a mixed method paradigm. Mixed method paradigm is an approach that enables the researchers to combine the quantitative and qualitative data all at once for addressing

research aims [11], [12]. The rationale of using this paradigm was the high possibility of providing a fuller and richer information related to the research focus being proposed. Particularly, the quantitative and qualitative data led the researchers to gain a more comprehensive result for answering the research questions [13]. Dealing with the previous description, the researchers determined to utilize the explanatory design which stressed the qualitative data for strengthening the quantitative data results having been gathered beforehand.

The present research used purposive sampling. Depending on the limitation of research being made, the researchers involved the fourth semester students at English Education Department enrolling Translation course, specifically Translation class local A1. The data collection at the research site was two months. The selected group was chosen for their accessibility and potential to generate a thorough and relevant database to the research focus [14], [15]. Additionally, for the procedure of taking the sampling, the researchers focused on one sample for two phases of research (QUAN →qual) in which at the second phase, sub-sample of the quantitative sample (nested sampling) was taken [16], [17].

Research Instruments
The instruments utilized in the present research were documentation, questionnaire, and interview.
1. Documentation. This instrument was required in order to gain a fuller information related to the translation techniques used by the fourth semester students in the process of text translation for writing purposes. The document was in the form of students' written translation results. The gathered data was beneficial to address the first research question and support or provide a rich information for the second research question.
2. **Questionnaire**. The researchers utilized a close-ended questionnaire. It aims to answer the first research question, "What are the translation techniques used by the fourth semester students in Translation class of English Education Department of Borneo University Tarakan?"
3. Interview protocol. This instrument helped the researchers addressing the second research question, "How do they perceive the use of machine translation tools for writing purposes in Translation class?".

Data Collection
After the research subjects had been successfully contacted and agreed to partake in the research, they were asked to translate the texts. The results of translated texts gathered from the research subjects were used for further data analysis. Next, the research subjects were asked to respond to the online format questionnaire. It was to obtain the information about their translation techniques and frequent use of machine translation tools in classroom activities or task completion. Time estimation for filling in the questionnaire was approximately 15 minutes with the close-ended type. The online format of questionnaire was selected to promote easy access, less time-consuming, and enabled the researchers get the data faster then transfer them into a variety of dataset formats. As a final stage of collecting the data, the researchers conducted a one-on-one interview with six students. Each student was interviewed for a minimum of 30 minutes and recorded. Particularly, the consent form was distributed beforehand. It was to ensure the subjects' permission for further analysis on the information given to the researchers.

Data Analysis
Quantitative Data. The quantitative data was analyzed using descriptive statistic. The researchers focused on the dataset analysis and seek for the data frequency. It was to focus on the measure of students' tendency of using machine translation tool and translation techniques for writing purposes. *Qualitative Data*. The qualitative data was analyzed by focusing students' exploration on the research focus. After gathering the data using recorder, the researchers made a transcript verbatim. Next, the data were transcribed and coded. Furthermore, after the data had been coded, the researchers tabulated the data with additional explanation. Finally, the researchers drew a conclusion and confirmation through a cross-section data analysis. The core point was the researchers focused on how the qualitative data provided richer and fuller explanation for the obtained quantitative results [12]. Certainly, in order to minimize the invalidity of data results, the

researchers only took the sub-sample from the sample involving in the quantitative data collection phase.

III. Results and Discussion

Considering the instruments used in this research, there are several points to elaborate in relation to the research subjects. Firstly, the research subjects were dominated by female gender (22 students/ 78.6%) than the male ones (6 students/ 21.4%) (see Figure 5.1). Then, most of them were at the age of twenty (64.3%), the age of nineteen (14.3%), the age of twenty-two (10.7%), and the remaining were at the ages of 21 and 23 (10.7%) due to the time of questionnaire filling.
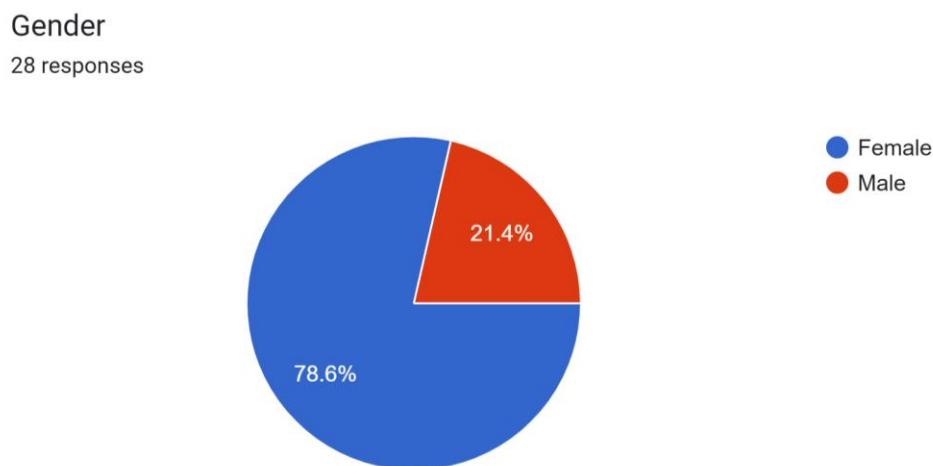

Figure 1. Research subject gender

Next, regarding the research findings, the researchers displayed the data by addressing each research question.

RQ 1: The translation techniques used by the fourth semester students in Translation class of English Education Department of Borneo University Tarakan
According to the data gaining from students' translation writing results, it can be stated that they used borrowing, literal translation, transposition, and adaptation.

Table 1. The data samples of borrowing techniques

| Original text	Translated text	Techniques
The phrase "**it's raining cats and dogs**" has been around for a long time.	*Ungkapan "<u>it's raining cats and dogs</u>" sudah ada sejak waktu yang lama.*	Borrowing
Polecats are part of the weasel family, common in Britain during that time.	*<u>**Polecats**</u> adalah bagian dari keluarga musang, umum di Inggris pada waktu itu.*	Borrowing
The Norse God of Storms, Odin, would often be pictured with dogs and wolves who were the symbol of wind.	*<u>**Dewa Badai Norse**</u>, Odin, sering digambarkan dengan anjing dan serigala yang merupakan Simbol angin.*	Borrowing
It could have originated through **Norse mythology**	*Itu bisa saja berasal dari mitologi <u>**Norse**</u>….*	Borrowing
…derived from the word **catadupe**….	…yang berasal dari kata	Borrowing

| | *cataduple* (air terjun)…. | |
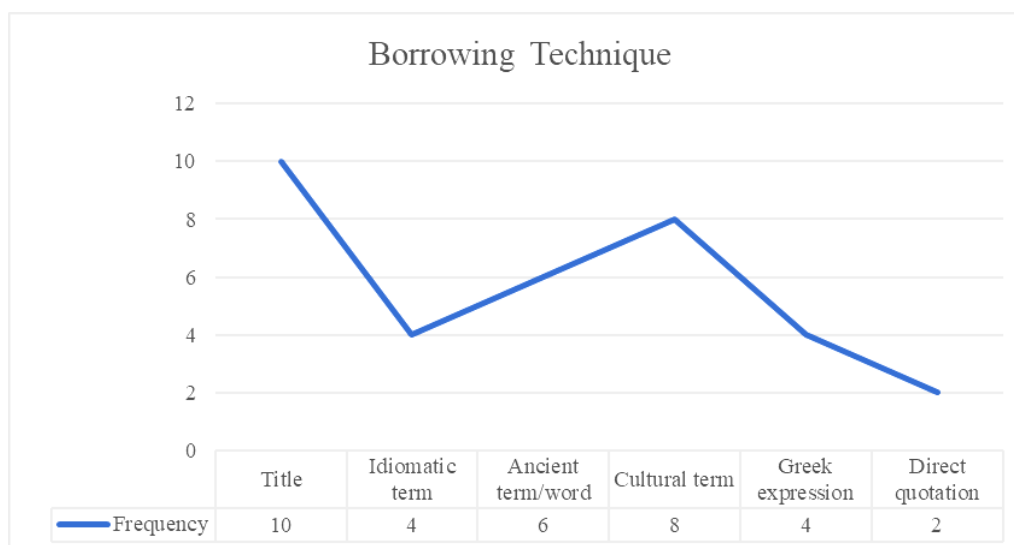
Figure 2. The frequency of borrowing techniques used by the students

Considering the data displayed on Figure 2, it was obvious that students still retained or borrowed foreign terms from the source language to the target language in their writing. This indicates that they have linguistic and semantic awareness in sorting and opting which words or phrases cannot be immediately translated into Indonesian, especially those with historical, culturally specific expression and profound meaning. Particularly, it supports the framework proposed by Vinay and Darbelnet [18] that borrowing is a common direct translation technique utilized when no lexical equivalent exists in the target language or when translators seek to preserve the cultural or conceptual integrity of the source text [19].

However, while borrowing demonstrates an emerging sensitivity to source-text nuances, it also exposes limitations in the students' academic writing proficiency. There are still typos, non-use of italics on foreign words or terms found in the target language writing, the ability to interpret or explain the meaning of certain foreign words or terms that have no equivalent in the target language, and follow writing conventions (e.g., writing capital letters and embedding quotation marks for titles). The aforementioned findings also confirm that novice translators often encounter difficulties not only with translation techniques but also with textual presentation and formatting [20]–[23]. Briefly, the students' tendency to borrow without adequate contextual or typographical adaptation implies recognition of the limitations inherent in direct translation, yet also highlights the need for further pedagogical support to facilitate the seamless integration of borrowed elements into the target text. Thus, their translation result reflects a transitional phase in translation competence-marked by cultural awareness and high necessity for technical capability, including academic writing conventions.

Next, Table 2 shows the result of students' translation indicating the use of literal translation.

Table 2. The data samples of literal translation techniques

Original text	Translated text	Techniques
The expression 'raining cats and dogs' has been around for a long time.	*Ungkapan 'raining dogs and cats' sudah ada sejak lama.*	Literal translation
Witches would ride their brooms during storms and were often seen with black cats….	*Penyihir akan menunggangi sapunya selama badai dan sering terlihat dengan kucing hitam....*	Literal translation
Could this strange weather truly rain cats and dogs?	*Mungkinkah cuaca aneh ini benar-benar menurunkan anjing dan kucing?*	Literal translation

The phrase started in the early 17th century	*Frasa dimulai pada awal abad ke-17*	Literal translation
The phrase did not become popular until 1738….	*Frasa ini tidak menjadi populer sampai tahun 1738….*	Literal translation
He mentions a roof safe from raining cats and dogs	*Ia menyebutkan tentang atap yang aman dari anjing dan kucing sedang kehujanan*	Literal translation
There's no record of that happening	*Tidak ada catatan tentang itu terjadi*	Literal translation
…catadupe means cataract or waterfall….	*catadupe berarti katarak atau air terjun*	Literal translation
Norse mythology consisted of myths of people of northern Germanic descent	*Mitologi Norse terdiri dari mitos orang dari keturunan Jerman Utara*	Literal translation
…which symbolized wind….	*...yang merupakan lambang angin….*	Literal translation

Furthermore, Figure 3 shows the frequency of literal translation used by the students in their writing.

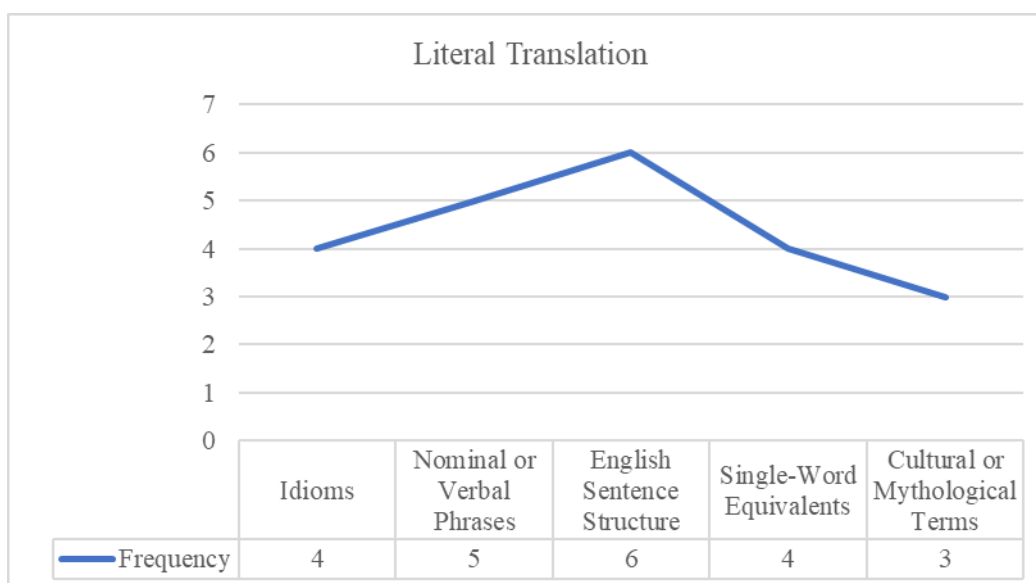|	Idioms	Nominal or Verbal Phrases	English Sentence Structure	Single-Word Equivalents	Cultural or Mythological Terms
Frequency	4	5	6	4	3

Figure 3. The frequency of literal translation techniques used by the students

Taking a close look at the data displayed in Figure 3, the highest frequency was found in the use of literal translation, particularly in relation to English sentence structures. This indicates that the students had tendency to retain the source language sentence structure pattern when translating text into the target language. This finding aligns with Vinay and Darbelnet's [18] classification of literal translation as a direct translation technique, which may be effective only when there is a close structural and semantic proximity between the two languages. However, when this technique is applied in the context of English-Indonesian translation with distinct grammatical systems, it often leads to the translation result that are grammatically distorted or semantically ambiguous. Furthermore, the literal translation tends to produce unnatural outputs and poses a high risk of multiple interpretations due to the grammatical and syntactical differences between the source and target languages. Therefore, this finding confirms the importance of a thorough understanding of the grammar of both languages in order to produce translations that are more flexible, natural, and semantically equivalent in the target language [24].

Next, Table 3 displays the result of students' translation indicating the use of transposition.

Table 3. The data samples of transposition techniques

| Original text	Translated text	Techniques
...which referred to the cataracts or waterfalls	...yang mengacu pada katarak atau air terjun	Transposition
...with a black cat as a sign of heavy rain	...dengan kucing hitam sebagai tanda hujan deras	Transposition
...to describe heavy rainfall	...untuk mendeskripsikan hujan yang deras	Transposition
Could have been trying to joke....	Sepertinya dia mungkin mencoba bercanda…	Transposition
This could come from....	Ini bisa berasal dari…	Transposition
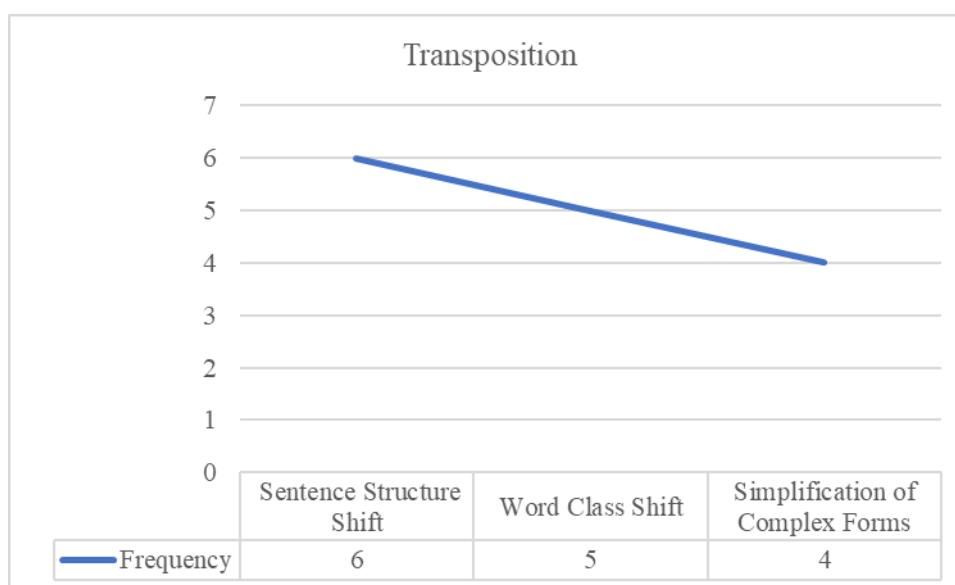
Figure 4. The frequency of transposition techniques used by the students

The frequent use of transposition across these examples indicates that the students have an awareness of the structural differences between English and Indonesian. Their competence to shift from the source language (English) to the target one (Indonesian) is demonstrated in terms of syntactic adaptation. Particularly, these findings align with Newmark's [25] viewpoint that effective translation frequently involves the stage of restructuring grammar to suit target language norms while retaining the meaning of source language. Additionally, the students' capacity to apply transposition supports the functionalist view [26], mainly on the urgency of creating natural and functional equivalents in the target language by changing the grammatical structure and restructuring it for a better fluency and stylistic effect in the target language. Nevertheless, although the students had already shown their ability in translating the text, some translations still require stylistic refinement through consistent activities in translation classes. As a consequence, these activities are expected to further enhance students' awareness of form and function in cross-linguistic contexts.

The final technique is adaptation. Table 4 shows the data samples of students' translation result using adaptation technique.

Table 4. The data samples of adaptation techniques

Original text	Translated text	Techniques
…dogs and cats rained in shower….	...anjing dan kucing sedang kehujanan….	Adaptation

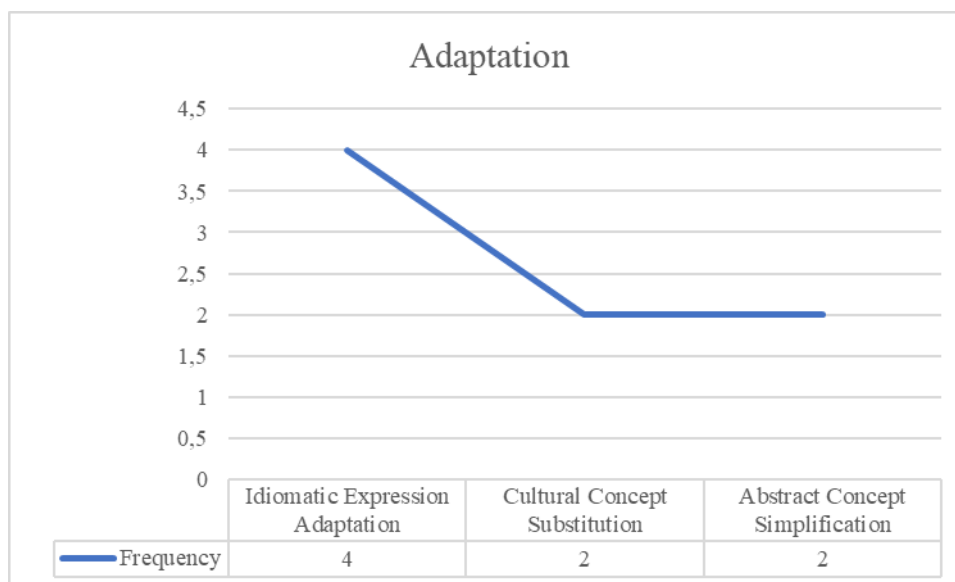| …trying to joke about the situation….	…*membuat lelucon tentang situasi tersebut….*	Adaptation
…mocking the upper class….	…*mengejek kelas atas….*	Adaptation
…raining cats and dogs….	...*hujan yang amat deras....*	Adaptation
…symbol of wind….	...*lambang angin....*	Adaptation

Figure 4. The frequency of adaptation techniques used by the students

Compared to the borrowing or literal translation, the adaptation technique was used fairly in the students' translation output. This was purposefully employed to handle idiomatic or culturally specific terms. Moreover, the students' developing proficiency in cross-cultural mediation, a crucial ability in translation practice, is highlighted by this selective application, mainly for idiomatic expressions, humour, metaphors, and context-specific phrase [26], [27]. The students, for instance, changed the cliché "raining cats and dogs" into expressions like "*hujan yang amat deras*" or "*hujan yang tak terbayangkan,*" putting pragmatic meaning ahead of literal form. This strategy is consistent with House's [28] idea of moving from overt to covert translation, where lexical fidelity is subordinated to communicative usefulness. Particularly, a growing emphasis on functional equivalency in line with Nord's [29] functionalist paradigm was also reflected in the rendering of abstract phrases like "contrary to experience" as "unnatural" ("*tidak wajar*"). These modifications imply that students are starting to highlight how the translation affects the intended audience, emulating the ideas of Skopos theory [30]. However, since there were only eight examples of adaptation technique use across all groups, it indicates the students' less preference in this kind of technique.

RQ 2: The fourth semester students' perception of the use of machine translation tools for writing purposes in Translation class.
Next, regarding the second research question, the research subjects classified themselves as the familiar ones with the use of machine translation tools for writing purposes. However, they did not automatically perceive MT as the sole tool they relied on during the creative process of translating the text for writing tasks. Instead, many of them viewed MT as an initial tool to promote comprehension and vocabulary retrieval, followed by individual endeavour in revision and proofreading.

"…I do not use machine translation [tools] for the entire translation process for my writing assignments. I use machine translation for initial comprehension, but I always edit and proofread

my own translations. I do this to ensure that my translations are accurate, fluent and contextually appropriate." [S1]

"…I always use it [MT tools] when I make my assignment…I actually revise it and sometimes I must consider the grammar and the vocabulary…." [S2]

The aforementioned excerpts emphasize the students' awareness of the advantages of using MT, but at the same time they realized about the multiple meanings and the context of text (as indicated by the questionnaire result of 92.6%). Their selective use of MT indicated that post-editing requires not merely linguistic knowledge but also critical awareness of meaning, style, and even genre reflecting the metacognitive strategies as aligned with the result of previous study [2]. Briefly, it means that they have acknowledged the necessity of adjusting themselves in determining what proper words to include in their writing in Translation class.

Another finding revealed that although the research subjects claimed that they frequently used MT for accomplishing their tasks, exercises, or assignments (53.6%), only small percentage of them (35.7%) were eager to find the definition of words displayed in the MT. This indicates a surface-level engagement with MT aiming for task completion without any intention to learn the words. Their viewpoint is also strengthened by the following excerpt:

"Machine translation [tool] is significant for me because it will help me to do my assignment easily. For example, translation course. Me as an English student, it is very useful when I want to translate my native language to other language like English." [S4]

This phenomenon is intriguing in relation to their status as EFL students. Furthermore, the less interest in vocabulary learning after using MT is also reflected in the statement item number 9 in which the research subject sometimes got complicated (75%) and often experienced confusion (14.3%) to determine what appropriate words in target language to include in their writing since MT output offered limited lexical options. This concern is supported by the following excerpt:

"Sometimes like Google translation does not provide other vocabulary that can be chosen. Sometimes, it just shows one word." [S5]

Nevertheless, they could not refuse the benefit of using MT (89.3%), especially when they unable to comprehend the significance of a word (57.1%). Meanwhile, they also used their own interpretation and personal judgement on the translation results provided by MT in the process of finalizing their writing (50%). These findings indicate the urgency of developing linguistic sensitivity and critical engagement with MT tools for enhancing the academic writing proficiency.

"I think the functionality of Machine Translation tools allows me to quickly pre-process and understand the gist of the incoming text. This saves time and computing resources, especially when dealing with long or complex documents. I can then focus my efforts on the finer details, such as capturing the intended meaning, tone and style." [S3]

As the result, it can be stated that the students still play their active role in using the translation results for their writing. Furthermore, half of them concern with their own interpretation towards the context and text being translated. It is a great step for them as EFL students as they consider the power of human in making linguistic interpretation for providing comprehensive, understandable, meaningful, and contextually appropriate with the words meaning, both in the source and target language. These findings are in line with the previous relevant studies addressing the importance of students' awareness in evaluating the text resulted from translation tools or doing check and re-check the text [9], mainly in the post-editing machine translation [2]. Overall, the study represents a promising direction for integrating MT tools into translation and academic writing pedagogy, supported by metacognitive strategies simultaneously.

IV. Conclusion

This research explored the translation techniques employed by the fourth-semester EFL students in a Translation course and examined their perceptions of machine translation (MT) tools in relation to academic writing. The findings revealed that the students used four main techniques—borrowing, literal translation, transposition, and adaptation—with varied degrees of accuracy and appropriateness. The frequent use of the first two techniques indicates distinct students' preference due to their focus on the structure of source text and an inadequate repertoire of restructuring strategies. Then, the presence of transposition demonstrates their flexibility in grammatical aspects as well as syntactic awareness. Furthermore, although adaptation was used less frequently, its application demonstrates students' emerging ability to adjust culturally bound elements for better audience relevance.

Next, concerning the use of MT, the students showed positive perception of MT tools as supporting aids for writing. Nevertheless, they admitted that although this tool poses the effectiveness and vocabulary suggestions, its inconsistent capability performance in generating stylistically refined and contextually proper output—particularly when dealing with complex and culturally embedded content—remain inevitable. Besides, the students' translation output and MT usage indicate a transitional stage in their translation competence, characterized by increased linguistic and cultural sensitivity but limited by a lack of ability to polish their writing, particularly in terms of conventional formatting in the target language. Thus, the regular endeavor should be carried out by the lecturers through the classroom instruction by focusing on meaning transfer [26] and the expression of ideas in writing requires conformity to academic writing norms [31], [32] simultaneously. Moreover, in order to produce polished academic writing, post-editing activities needs to be done when the students finish using MT tools for translating texts. Particularly, this effort is significant in improving their critical self-editing skills through noticing and correcting their writing mechanical and stylistic errors [33], [34]. Reasonably, there is a linkage between translation and writing, mainly in fostering students to be more aware of transferring grammatical and rhetorical knowledge from the source language into the target language. Additionally, the translation activities stimulate students gradually to shape meaning, manage audience expectations, and follow the writing convention in the target language. By integrating the translation practices with writing pedagogy, the students will gain meaningful and impactful learning experiences reflected on their accuracy, fluency, and professionalism in academic writing.

Finally, since the present research was only carried out in a relatively small-scale subjects from a single institution—limiting the generalizability of the findings—and allowed students to make use of any MT tools for assisting them during the translation activities, the further research can involve a larger number and more diverse group of research subjects so there will be more robust insights into students' behaviors towards the translation process using MT tools. Besides, it is also valuable to focus on specific MT tools in order to investigate the students' engagement in post-editing critical self-editing skills, mainly promoted by pedagogical interventions.

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