



## The translation of Indonesian Passive Voice in Research Articles' Abstracts into English: Human Vs Machine Translation

### Penerjemahan kalimat Pasif di Abstrak Artikel Penelitian ke Bahasa Inggris : Penerjemahan Manusia Vs Mesin

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#### Abstract

The existence of abstracts within research articles (RA) is one of the requirements of a published article. When the research is important internationally rather than locally, the abstract should be translated into English. Since lots of passive voice construction was found in Indonesian research articles, this study aims to explore the translation of passive voice in Indonesian RA abstracts into English conducted by human translation and machine translation (*google translate*). This present study is translational research by applying interpretative qualitative-quantitative analysis. The data in this study were RA abstracts obtained from Journal "*Linguistics Indonesia*" which was published in 2015- 2021, there are 60 research articles in total. After analyzing those articles with *AntConc* (a corpus-based analyzing tool), it was found that there are 341 passive voice occurrences in Indonesian research articles. However, in the translated abstract corpus, TERA-HT there are 308 occurrences and in TERA MT with 321 occurrences. Besides the differences in the frequency, there are also some differences in linguistics feature of passive in the translated abstracts, such as 1) The difference in using tenses; 2) The differences in using "Be (Singular/Plural); 3) the difference in using the passive voice construction and 4) Modulation (the change of Passive voice into Active voice). This research also reports that human translation is better than machine translation.

**Keywords:** Passive voice translation, Research articles' abstracts, Human and Machine Translation

### **Abstrak**

*Keberadaan abstrak dalam artikel penelitian merupakan salah satu syarat artikel yang diterbitkan. Ketika penelitian itu penting secara internasional daripada lokal, abstrak harus diterjemahkan ke dalam bahasa Inggris. Karena banyak ditemukannya konstruksi kalimat pasif dalam artikel penelitian bahasa Indonesia, penelitian ini bertujuan untuk mengeksplorasi penerjemahan kalimat pasif dalam abstrak artikel penelitian bahasa Indonesia ke dalam bahasa Inggris yang dilakukan oleh terjemahan manusia dan terjemahan mesin (google translate). Penelitian ini merupakan penelitian penerjemahan dengan menerapkan analisis interpretatif kualitatif-kuantitatif. Data dalam penelitian ini adalah abstrak artikel penelitian diperoleh dari Jurnal “Linguistik Indonesia” yang terbit pada tahun 2015-2021, jumlah artikel penelitian sebanyak 60 artikel. Setelah dilakukan analisis terhadap artikel-artikel tersebut dengan AntConc (alat analisis berbasis korpus), ditemukan 341 kemunculan kalimat pasif dalam korpus artikel penelitian Bahasa Indonesia. Namun, pada korpus abstrak terjemahan, TERA-HT terdapat 308 kemunculan dan pada TERA MT 321 kemunculan. Selain perbedaan frekuensi, terdapat juga beberapa perbedaan fitur linguistik kalimat pasif dalam abstrak yang diterjemahkan, seperti 1) perbedaan penggunaan tenses; 2) Perbedaan penggunaan “Be (Tunggal/Jamak)”;* 3) perbedaan penggunaan konstruksi kalimat pasif dan 4) Modulasi (perubahan penerjemahan dari kalimat pasif menjadi kalimat aktif). Penelitian ini juga melaporkan bahwa terjemahan manusia lebih baik daripada terjemahan mesin.

**Kata kunci:** *Terjemahan kalimat pasif, Abstrak artikel penelitian, Terjemahan Manusia & Mesin*

### **INTRODUCTION**

A published Research Articles (RA) usually starts with an abstract which is the first thing people read before deciding to read the research in its entirety. Hardjanto, (2017) noted that an abstract is a description of the factual summary of a longer report, which means to provide readers with an accurate and concise knowledge of the full article. This given definition seems to suggest that abstracts faithfully portray the form and content of the original article. Furthermore, Loré, (2004) asserts that the abstract is the gateway that leads the readers to take up an article whether the article is suitable for them or not. Briefly, the abstract highlights the content of the research article. When the results of the research are important internationally rather than locally, English is often used as the lingua franca. Consequently, the majority of the research articles are published in English, or at least the abstract is translated into English. According to Viera, (2019) English translated version of the RA abstract is a great chance for non-native authors to advertise their research internationally.

Because of the important role of abstract in the research articles, many scholars were interested in conducting the research about abstract, not only to investigate the linguistics features but also to analyze the abstract translation into the target language. Ufnalska, (2007) investigated the problems related to translation of abstracts of research articles into English. This research found that the problems were in the shortage of professional scientific translators and the insufficient knowledge of non-native-speaker researchers about the proper style and structure of scientific abstract in English. Fitria, (2018); Carolia, (2019) also identified the types of translation techniques and the most dominant type of translation techniques used in

the translation of journal and postgraduate thesis abstract. Based on the findings of the research, the most dominant type of translation technique which is used in translating the abstract is transposition/shift (Fitria, 2018). It happened because this technique replaces the grammatical categories of the source language into the target language. However, Carolina (2019) reported that the most dominant procedure used in translated thesis abstracts is literal translation.

In countries where English is the second language and non-speaking English nations including Indonesia, tend to use passive voice in their research articles and even the passive voice is not only prevalent but heavy-handedly enforced in universities research institutes (Inzunza, 2020). Reconsidering the use of passive in research articles some studies had been conducted by Ahmad, (2012); Subagio et al., (2019) which revealed that the passive voice occurrence is higher than active voice. In line with this statement, Horbowicz et al., (2019); Emeksiz, Erk, (2015), also expressed that passive voices are often taken to be the hallmarks of academic text and traditionally considered to be one of the distinctive features of scientific texts. The passive voice is grammatical construction in which the subject of the sentence, clause or verb is affected by the action of a verb or being acted upon by the verb, Scholastica, (2018); Apandi & Islami Fajry Nur, (2018)). In line with this definition, the passive voice is used when the doer of an action is unknown, or unimportant, or when the emphasis is “on the experiment or process being described” (Hacker, 2003). Jean-Paul Vinay & Darbelnet, (2013) also states that there is a technique in translating the passive voice, that is modulation which change the translation from passive in to active.

Regarding the usage and the rules of passive voice are different among languages, which makes passive not identical in all languages. In English, The passive voice can be constructed in many different forms. The most basic passive pattern is the short dynamic be-passive “Be-verb + Past Participles’ constructions (Biber et al., 2009, p. 938), e.g. “is carried, was selected, was written, etc). However, the other passive construction in English only used the past participle to show the passive Voice, e.g. “The movie displayed in the cinema”. In this case, the passive voice does not use the “Be verb” formula.

As has been discussed in English, Indonesian also has its own passive construction. There are some ways in constructing passive voice in Indonesia, those are: 1) by adding prefix *di-* into the base verb; 2) by adding prefix *ter-* into the base verb, Alwi, et.al.(2003). The first and the most common way of forming passive constructions in Indonesian is using verb base attached with prefix *di-*, {prefix *di-* + base verb}, e.g. *dimasak* (is cooked) , *dikirim* (is sent), *dianalisis* (is analyzed),etc. Furthermore, {Prefix *di-* + base verb + suffix *-i, -kan, nya*}e.g. *Disuguhi* (is served), *dikatakan* (is said), *dibakarnya* (is burned). This construction is commonly used if the subject/agent is a noun or noun phrase. Then, if the action is unintendedly done, the prefix used is *ter-* instead of *di-*. The construction is {prefix *ter-* + verb base}, e.g. *terbawa* (is brought), *tertabrak* (is crashed), etc, and {prefix *ter-* + base verb + suffix *-i, nya, kan*}, e.g. *terlemparkan*, *terbawanya*, *terlemparkan*. The characteristic of translating the English passive voice into Indonesian passive *ter-* is when the action is unintendedly done, for example: “The book was brought by my mother”; the translation: “*Buku itu terbawa ibu*”, it means that his/her mother is unintendedly bringing the book.

The notion of passive translation has caught the eyes of many researchers during recent years. Widya & Ayu, (2015); Apandi & Islami Fajry Nur, (2018); Amalia et al., (2019) analyzed the passive voice translation found in the novel and

book. These previous research were investigated by applying the grammatical and semantics approaches. The findings of this research showed that the translation problems can be either in semantic aspect or grammatical system. Despite those obstacles, the translators had been capable of producing the natural translation by involving the cultural context and translation shift. Interestingly, some passive in Source language is translated into active voice, (Amalia et al., 2019). Ekasani et al., (2020) also interested to analyze the translation of English - Indonesian passive sentences in cookbooks. The result shows that the Indonesian passive sentences are also translated into English passive constructions. However Liu, & Jin, (2012) reported that the passive voice often appears in documents but seldom gets the right translation results, which has greatly affected the understanding of the full text. In response to those studies, passive voice becomes fruitful to explore in conducting research especially about the translation of the passive which is basically the main focus in this study.

Recently, in doing translation, humans have been helped by machine translation. Some researchers use machine translation, specifically *google translate* to translate their research article abstract. Ghasemi & Hashemian, (2016) conducted a research on *google translate* translations, and found out that there is lexico-semantic and active/passive translation errors were the most and the least frequent errors. For further extent, (Napitulu, 2017) investigated the frequency of errors in the translation abstracts produced by *google translate* with reference to Kehavarz's (1999) model of error analysis. One of five error classifications used as parameters is passive voice error. Although those previous studies analyzed abstract and its translations, there were not many studies to compare the linguistics features of translated abstract conducted by human and *google translate*. For this study the research is focused on passive voice translation. Therefore, This present article aims to investigate whether there is any linguistic difference or whether there are any shared features in translated Indonesian Passive voice into English conducted by Human and Machine Translation.

## RESEARCH METHOD

This present study is a translational research which took an interpretative qualitative-quantitative analysis. The quantitative data strands to find out the occurrence of passive in the abstract corpus, meanwhile the interpretative qualitative is used to give the breadth and depth analysis on passive translations. The main data used in this study is Indonesian Research Abstract Corpus coded with IRAC which consists of 60 research article abstracts in the field of linguistics, taken from Journal of "*Linguistik Indonesia*". This journal is an open-access journal and is available on the internet [http://ojs.linguistik-indonesia.org/index.php/linguistik\\_indonesia](http://ojs.linguistik-indonesia.org/index.php/linguistik_indonesia) and Published by Masyarakat Linguistik Indonesia. The reason for choosing this journal is because it is easy to obtain and also provides abstracts in Indonesian and English translation. Those articles were taken from the archives which had been published since 2015- 2021. The other corpus are 60 Translated English Research Abstracts by Human Translation coded with (TERA-HT) which had been already provided in the research articles and 60 Translated English Research Abstracts by Machine Translation (translated by *google translate*) coded with (TERA-GT). This following table showed the frequency of each corpus used in this current study.

Table.1. The comparison of word frequency in those corpora

The Corpus	Word Types	Word Tokens
IRAC	2.187	9.930
TERA-HT	2.393	10.651
TERA - GT	2.305	11.486

The table illustrates the different frequency of word types and the word tokens in those corpora. The word type is highly presented in TERA-HT and the lowest frequency is owed by IRAC. However, word tokens (total number of words in the corpus) are dominated by TERA- GT. The different frequency of the source language corpus and the target language corpus is affected by the grammatical difference of Indonesian and English. In collecting the data, purposive sampling methods is applied. The main data used only the passive voice which are contained in the abstracts. From 9930 word tokens in Indonesian, it was found that the total of passive voice occurrence are 347, consist of 328 data with affix *di-*, and 19 data with affix *ter-*.

In conducting this research, there are some tools which are used in analyzing the data, those are; 1) *AntConc 5.3.8*, in this present study, the software *AntConc 5.3.8* used to analyze the frequency of the passive voice existing in the research abstract. This software is mostly used as a corpus- based analyzing tool and freely accessed in [Laurence Anthony's AntConc Software](#). In this software, we can load our files and can see the number of word tokens refers to the total number of words in the corpus. Besides, the overall distribution of the researched items shown under “Concordance Plot” and the detailed contexts of each retrieved word can be seen via “File Views”; 2) CLAWS Part-of Speech Tagger for English, This software is called a grammatical tagging system which is developed by UCREL at Lancaster and available in [CLAWS part-of-speech tagger for English](#). The free web tagging service offers access to latest version of the tagger, CLAWS4, (<http://ucrel.lancs.ac.uk/claws/>, 20th June 2021) which was used to tag the POS million words in the British National Corpus(BNC) and other corpora. The free trial of CLAWS POS can be accessed on <http://ucrel-api.lancaster.ac.uk/claws/free.html>, and provides two tagset namely C5 tagset and C7 tagset. The C5 tagset has just over 60 tags while the C7 tagset is more precise with 130 tags (<http://ucrel.lancs.ac.uk/claws/>, 20th June 2021); and 3) *Google Translate*, as one of the well-known machine translations, *Google Translate* is an online-free translation engine that has already been able to translate not only words, but also phrases, parts of a text, and even the web page (Karami, 2014). Nowadays, *Google Translate* is used by most internet users around the world, expanding to over 100 languages today (Koehn, 2020). GT is available and accessible via web browser (<https://translate.google.co.id/?hl=id>) and mobile application with a limit of 5000 characters. In this study, Google translate is used to translate the Indonesian abstract into English.

Then, In collecting the data, the researchers conduct some steps; 1) Downloading the article files from “Journal Linguistik” Indonesia website; 2) Building the Indonesia Research articles’ abstract corpus; 3) Tagging the Translated English research by Human translation with CLAWS POS Tagger and building the TERA\_HT corpus; 4) Translating the Indonesian Research articles’ abstract with *google translate*, tagging with CLAWS POS and building the corpus TERA\_MT. Those corpora should be saved with txt.files to be familiar with AntConc. 5) Loading

those corpus into AntConc and find out the frequency of passive voice in each corpus. To find out the number of passive voices in Indonesian corpus by using AntConc, insert the formula `[\b..\b][a-z]+?`, the search box is filled based on the prefix/suffix of the passive voice, e.g. to find the number of “prefix di- + base verb + suffix -i”, the formula becomes `[\bdi[a-z]+?i\b]`. In order to find all the occurrences of the word, we should checklist the “regex” in concordance (a listing of each occurrence of a word (or pattern) in the corpus). Then click “start” and all the words containing prefix di- and suffix -kan will be displayed. However, there are some words which are detected by the given formula which are not passive voice, e.g. *diri* (*self*) is counted as a word containing the given formula. Consequently, we need to eliminate them manually. Then to find out the frequency of passive voice in translated abstract, put the corpus into *AntConc* which has already been tagged. Then insert “VVN” in the search box, VVN is the the tagging for participle verb (Verb 3) which is an essential verb in passive voice. To limit the findings with “VVN”, since “VVN” is also used in perfect tense, we used the “advanced search” and add the “Be-verb [is, am, are, was, were, be [to be, can be, could be, shall be, should be, will be, would be, etc], being, been,”. This following figures are the screenshot of *AntConc* as the examples in finding the frequency of passive voice in the corpus

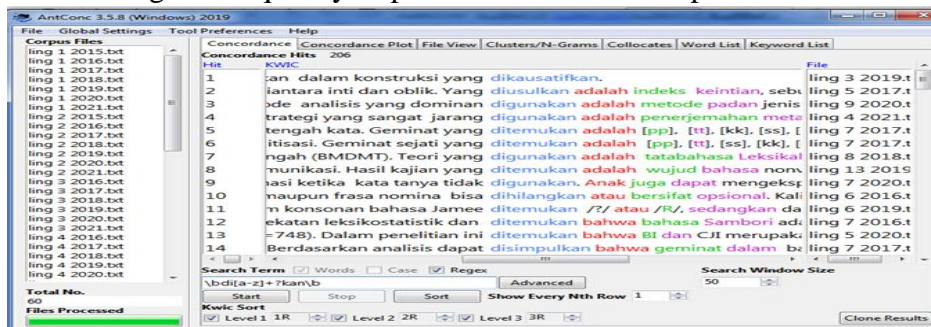


Figure.1. The screenshot of Indonesian Passive Occurrence with “prefix di- + base verb+ suffix -kan” in *AntConc*.

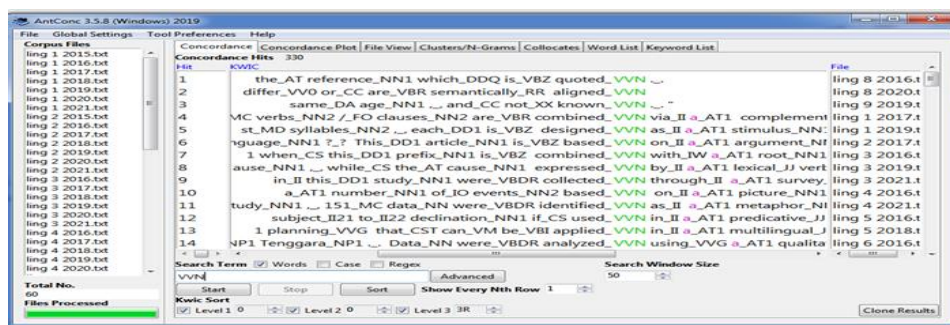


Figure.2. The screenshot of English Passive Occurrence in the translated abstract in *AntConc* which have been tagged with CLAWS POS tagger.

For the data analysis, the quantitative data (the translated passive voice) is then classified based on the English passive construction. The result of the analysis shown on the chart to see the difference between the frequency of passive voice translated by human and machine translation. Then, the interpretative analysis is conducted to see the linguistics feature shared in the translated abstract.

## RESULT AND DISCUSSION

### Research result

After conducting the translation analysis of the Indonesian passive voice into English, it was found that there is a variation between translated English corpus by human translation and translated English corpus by machine translation. The specific differences are in terms of passive occurrences frequency, the tenses used and also the choice of words. In the human translation corpus it was found that there are 209 occurrences of passive constructions with “Be+Participle” and 99 occurrences of passive construction without “Be”. However, in the machine translation there are only 196 occurrences of “Be + Participle” and 125 occurrences of passive construction without “Be”. It means that there are 13 different occurrences and dominated in Machine translation. The following figure is the statistical distribution of “Be +participle” in both corpus.

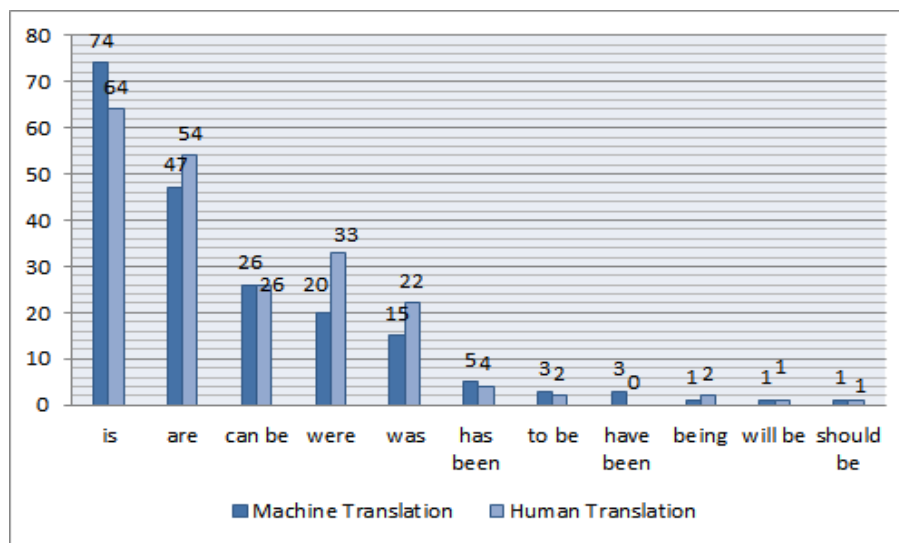


Figure.3. The frequency of Passive “Be +Verb” in Translated English Abstract

Even though the passive occurrence in Human translation is higher than Machine translation, it is not easy to state that the occurrence in each “Be verb” is prominent in Human translation. This result indicates that in the human translation the frequency of “Be (past)” [were, was], “Be” (present) [are], being, is higher than the occurrence in the machine translation, but it also shows that “Be (present)” [is]; has been, have been, and to be, is higher in the machine translation. Then the other occurrences such as [can be, will be, and should be], shows the equal frequency. This comparison could be the guidance for the interpretation to show the difference between the two corpora.

#### a. The difference in using tenses

As mentioned in the previous theory, the Indonesian passive is marked by prefix *di-* and *ter-* while English passive constructions are different based on the use of tenses. The following sentences are the examples of passive voice in the source language (SL) which is translated in to different tenses.

1) SL : *Kesalahan itu **dibagi** menjadi 5: kalimat tanpa subjek, kalimat terlalu panjang, kalimat tanpa jeda, kalimat tidak tuntas, dan klausa menggantung.*

HT : The mistakes **were classified** into five types: sentences without subject, excessively long sentences, run-on sentences, unfinished sentences, and hanging clauses.

MT : The error **is divided** into 5: sentences without subject, sentences too long, non-paused sentences, incomplete sentences, and hanging clauses.

This given examples shows that the Indonesian Passive construction “*dibagi* [prefix *di-* + verb base (*bagi*)” is translated by human translation in to “were classified” [Be (past-plural) + participle], while *google translate* translated it become “is divided” [Be(present-singular) + participle]. In this case, the human translation chooses the “Be (past)” because the translator understands the context of the sentence which is already done in the past. Based on this finding, the *google translate* cannot fully see the context of the sentence yet. These findings also tell us that the *google translate* prefers choosing the present tense to choosing the past tense. Consequently, the frequency of “Be (present)” is higher in the translated English corpus by machine translation.

#### **b. The difference in using “Be (singular) and Be (plural)”**

Then, concerning the use of “Be” (plural and singular) is also frequently different between the human and machine translation. This following example is one example of the difference.

2) SL: *Metode kualitatif diaplikasikan karena data dalam penelitian ini merupakan data verbal.*

HT : The qualitative method **was employed** since the data were in the form of verbal data

MT : Qualitative methods **are applied** because the data in this study is verbal data.

The difference that implies in the given example is in the use of “Be (singular)” and “Be (plural)” . In the data (2) the Indonesian passive “*diaplikasikan* [prefix *di-* + base verb (aplikasi) + suffix- *kan*”, translated into “was employed” [Be (singular-past) + participle] while machine translation “are applied” [Be (plural-present) . Based on the researcher's analysis, the human translation has effectively used the “Be (singular-past)” because the subject in the passive sentence is a singular noun and the use of past tense because the research is already done in the past. Nevertheless, The *google translate* used the “Be”(plural) because the subject is translated into the plural form “qualitative methods”, therefore the program in the google translate will directly use the “Be(plural)”.

#### **c. The difference in using the passive construction.**

As has been explained in the previous theory, there are some ways in constructing the English passive, it can be by using “Be +Participle” construction or without “Be” construction, by simply using the participle form. The difference of passive construction shown in the following examples:

3) SL : *Fakta bahwa sebuah morfem digunakan untuk fungsi-fungsi tersebut mendorong pertanyaan apakah morfem aplikatif (Source: Ling 1 2021)*

HT : The fact that a single form **is used** for these different functions raises the question of whether the applicative.

GT: The fact that a morpheme **used** for these functions prompts the question of whether the morpheme is applicative.



4) SL : *Dengan menggunakan data yang diambil dari buku-buku teks berbahasa Jawa dan data dari hasil kreasi penulis yang sebelumnya.*

HT : The data **are extracted** from Javanese textbooks and added with sentences of my own creation whose grammaticality and acceptability are previously tested.

GT : By using data **taken** from text books in Javanese language and data from the creations of the authors previously.

From data (3) the Indonesian passive “*digunakan* [ prefix *di-* + verb base(*guna*) + suffix *-kan*] and data (4) “*diambil* [prefix *di-* + verb base (*ambil*)]” is translated by Human by using “Be” formula while the *google translate* tends to use the passive construction without “Be”. Therefore, the frequency of without “Be” construction is higher in the machine translation than human translation. Based on the researcher’s analysis, when one variation of passive voice exists many times in *google translate*, the program will prefer the more general translation specifically in the translation of Indonesian passive voice. Therefore, what google translate means is purely based on the program that is embedded in itself.

#### d. The translation of Passive in to Active and Vice Versa

The difference in the occurrence frequency of passive voice in the corpus draws the researcher’s attention in analyzing the abstract translation. Evidently, there are changes of voice in the translation from active voice to passive voice and vice versa. The following examples showed the difference of voice in the source language and target language.

5) SL : *Yang diusulkan adalah indeks keintian, sebuah metode baru untuk menentukan tingkat keintian sebuah argumen.*

HT : It **proposes** a core index, a novel method to determine the core status of an argument.

GT : What **is proposed** is an index authenticity, a new method for determining the significance of an argument.

6) SL : *Akan tetapi, penelitian ini juga menemukan ketidakselarasan antara persepsi dan praktik, di mana penggunaan bahasa Jawa di rumah mengalami penurunan drastis.*

HT : However, inconsistencies **are identified** between attitudes and practices, with use of Javanese as a home language decreasing,

GT : however, this study also **found** inconsistencies between perception and practice, where use of Javanese at home has decreased drastically.

In the source language (data 5) the Indonesian passive voice “*diusulkan* [prefix *di-* base verb (*usul*) + suffix *-kan*] is translated in to “proposes” by human translation which basically the active voice construction. So, the passive voice is translated in to active voice. However, the machine translation translate it into “is proposed “[Be(present-singular)+ Participle] which is a passive voice construction. Then, in other examples (data 6) the word “*menemukan*” is translated as “are identified” [Be(plural-present) + Participle] which is basically one of the passive constructions in English. The change of translation from passive to active voice is considered as a modulation technique. However the google translated retained to translate into active voice. The conversion of active construction in Indonesia into passive voice in English is certainly grounded by the selection of the most appropriate syntactic as well as the most natural carriers of the original meanings.

Beside those differences, when the passive voice in Indonesian passive has the time marker such as “*akan*” [shall, will, should] and other modals such as can, the sentences are correctly translated by *google translate*. Therefore, the frequency of passive voice with modals [can, shall, will, should + Be + Participle] shows the equal frequency in human and machine translation. This following examples shows that google translate can effectively translate the passive voice with the aspect marker.

7) SL : *dapat disimpulkan bahwa kebutuhan mahasiswa terhadap kamus khusus bidang bisnis dapat dipenuhi dengan penyusunan kamus menggunakan leksikografi.*

HT : It **can be concluded** that the students needs for business specific dictionary can be fulfilled by compiling a dictionary using lexicography

GT : it **can be concluded** that the student's need for a special dictionary in the field of business can be met by compiling a dictionary using lexicography.

8) SL : *kosa-kata seperti ini akan diuraikan dalam \xF55.*

HT : Finally, words that are inalienably marked **will be presented** in \xF55.

GT : vocabulary like this **will be described** in \xE45."

In the data (7) the Indonesian passive phrase “*dapat disimpulkan*” is translated as “can be concluded [modal (can) + be + participle] by both human and machine. In addition, in the data (8) the Indonesian passive phrase “*akan diuraikan*” is translated as “will be presented [modal (will) + be+ participle] by Human translation and “will be described [modal (will) + be+ participle]. From this data the machine translation is capable of translating the passive voice with [modal + be+ participle] formula.

### **Discussion**

The findings of this study revealed that the features of translated abstract in both human and machine translation are different. From the result we can infer that the machine translation prefers the use of present tense rather than past tense. It can be seen that the total count of “Be (present)” is higher in the machine translation. The researcher thought that this is due to the fact that *google translate* cannot effectively and efficiently see the context of the text, to translate it based on the suitable grammatical pattern. Therefore, to overcome that problem, the google translate choose present passive construction if there is no the time marker or another passive marker on the text. Nevertheless, the google translate is able to translate the Indonesian passive into the English passive construction even though sometimes with the inappropriate tenses. This finding is consistent with, (Suprato, 2013); (Simanjuntak, 2019). Then (Arvianti, 2018) also reports that Machine translation has good result in translating the formal language, then the human translation is good in both formal and non-formal language. It is the fact that human translation is much better than machine translation.

Then, in terms of using the “Be (plural) or “Be(singular), Sometimes the *google translate* uses the inappropriate be, it happens due to the Indonesian plural marking is sometimes not fully shown. As in the data (1) *kesalahan* [mistakes (plural)] is translated into “error (singular)”, however the mistake is more than one, so a human translator who can see the context can translate it with the appropriate “Be”. This mistranslation also can create problems in translation. Then, in terms of changing the voice from passive to active, also is done by humans. The change of translation from active to passive is called a modulation technique. According to (Jean-Paul Vinay & Darbelnet, 2013), Modulation is defined as a variation through change of viewpoint, of perspective and very often of category of thought. This

Modulation also will aid the translator to illustrate the difference between literal translation and coherent meaning translation. (Rosita, 2016). (Jean-Paul Vinay & Darbelnet, 2013) also classified modulation in to some terms and the change of passive voice into active is one of the classifications. The modulation technique is done to produce the natural translation and conceived to be the most appropriate way of retaining the original meaning in the source language. In this study, the human translation intends to use modulation technique. However in translating indonesia passive voice into English the machine translation keeps retaining the passive voice.

So, based on the previous explanation, *google translate* does not involve much linguistic consideration yet in translating the passive voice. This finding is consistent with the findings of (Halimah, 2018) which found that *google translate* is able to quickly produce the translation of words, phrases and sentences without the need to refer to dictionaries. Nonetheless, the Machine translation still requires human power in order to get a better translation. Furthermore, (Napitulu, 2017) investigated the frequency of errors in the translation abstracts produced by *google translate* with reference to Kehavarz's (1999) model of error analysis. One of five error classifications used as parameters is passive voice error. This fact tells us that human translation cannot fully be taken up by google translate yet.

This article is a modest contribution to the ongoing discussion about the quality of the abstract translation. The researcher does not concentrate on the quality yet. For further research, it is suggested to see the accuracy of the abstract translation conducted by human and machine translation and also try to figure out the translation result conducted by *google translate* and human.

## CONCLUSION

Overall, the passive voice translated by human and machine translation is different in terms of passive voice occurrence frequency. In the Indonesian corpus there are 347 passive voices, meanwhile in the translation, it was found only 308 passive voices in TERA-HT and 321 passive occurrences in TERA-MT. The difference of the frequency is because the modulation technique is applied in translating the passive into active voice. The translation conducted by Human translation and machine translation also shared the different linguistic features, specifically in terms of ;1) The tenses used ; 2) The use of "Be (plural/singular); 3) the use of passive constructions and 4) modulation technique applied in translation. Based on the researchers' interpretations, the passive voice translation which is conducted by *google translate* still needs the human power to make a better translation since humans can see the context of the text. In conclusion, the human translation is much better than the translation conducted by *google translate*.

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