Time management and translation method in translating a scientific article: A case study on a professional translator

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ARTICLE INFO	ABSTRACT
	As an activity of transferring a message from a source text to a target text, translation certainly involves several processes. Different processes require certain amount of time allocation depending on the translator's cognitive load. Studying translation process is essential to reveal what actually happened while a translator was doing his/her tasks, contributing to a better translation product. This study aimed at finding out the time management and the translation method in translating a scientific article by a professional translator. The scientific article is composed of more than five thousand words; thus, the researcher reduced the limit of the words to one thousand words to avoid the technical problems. This qualitative study used a case study as the research method. The participant of this research was a professional translator from the Association of Indonesian Translator (HPI). The data were collected using a keyboard logging program (Translog-II) and a screen recording tool (OBS Studio). Based on the data analysis it was found that the professional translator (i) distributed more time in the drafting stage; and (ii) applied the linear and inline methods during the translation process. It was found that the professional translator focused translating on word by word, phrase by phrase, and paragraph by paragraph. It is concluded that the activities in each stage of translation process contributes to the result of translation.

Translation seems to be a simple activity, i.e., rewriting a text in another different language. In addition, machine translation and other computer assisted tools are now accessible to ease the translation task.

However, translation is more than only rewriting a text in another language as it passes through a number of cognitive processes. Dimitrova (2010) argues that translation process is a cognitive activity of producing a target text in one language based upon a source text in another language. Writing in another language is not an easy task since different languages use different linguistic features (Arono & Nadrah, 2019), thus presenting difficulties to find the acceptable equivalent of some words into the target language.

The argument above indicates the need for an investigation on the actual activities taken by a translator in a translation process, known as research on process-oriented translation (Holmes, 1988). As such, it has a strong empirical foundation and aims to understand the nature of the cognitive processes involved in translating, with a focus on the individual translator.

There are three main stages of the translation process, i.e., pre-drafting, drafting, and post-drafting (Jakobsen, 2003; Mossop, 2014). In the pre-drafting stage, the translator tries to decode the messages in the source text (ST) to get good comprehension before he/she begins to transfer them into the target language (TL). In the drafting stage, the translator writes the text in the TL resulting in a translation draft, or a target draft (TD). The TD needs to be edited to produce a target text (TT) and this process is known as the post-drafting stage (Sofyan & Tarigan, 2017).

One of the instruments that effectively records the translator's writing style and method of solving the challenges during the translation process is Translog, key-stroke logging software that logs every keystroke and mouse event of the writing process together with an exact time record and saves this information in a logging file (Jakobsen, 1999). It is then possible to see all deletions, changes in the text, and pauses together with their exact length, as well as to replay the writing process on the screen for analysis objectives or to use the subjects' writing process as a cue for retrospection (Hansen, 2006). The logging software most frequently used in Translation Studies is Translog, developed by Jakobsen and Schou at the Copenhagen Business School, and applied in some research projects investigating different aspects of the translation process (Jakobsen, 2003; Hansen, 2006).

In the context of translation that involves English and other languages, studies on process-oriented translation have been done by many researchers (e.g., O'Brien, 2006; Immonen & Makisalo, 2010; Immonen, 2011; Jakobsen, 2011; Kourouni, 2012; Kumpulainen, 2015; Carl et al., 2016). However, in the context English-Indonesian translation, there are few studies conducted on the translation process (Sofyan & Tarigan, 2017; Rosa, 2017; Rosa et al., 2018; Batubara, 2018). Sofyan and Tarigan (2017) investigated types of self-correction done by the student translators and found out how self-corrections contributed a lot to the quality of their translation product. The result was that

the student translators did eight types of self-correction and spent more time doing self-correction to produce a better quality of the translated text.

Rosa (2017) investigated how student translators and professional translators managed their time in the process of translating, including decoding the ST, writing the translation draft, revising the draft, and taking pauses. In addition, he also found the shifts done by the student translators and professional translators in terms of transitivity, mood, and theme elements in the translation process. His finding also contributed to propose a model of translation from English (SL) to Bahasa Indonesia (TL) using an SFL metafunction theory.

Furthermore, Batubara (2018) investigated the translation process of novice translators while translating Mangkobar text (one of the traditional texts written in Angkola language) from Angkola Language (AL) to Bahasa Indonesia (BI) and from BI to English (EN). She found that the novice translators distributed more time in pre-drafting and drafting stages while translating from AL to BI; distributed more time in drafting and post-drafting stages while translating from BI to EL, and distributed more time on processing as translation tasks in drafting stage whether in translating from AL to BI or BI to EL.

The previous studies mentioned above allow more investigation on the other parts of translation process, such as time management and translation method. Thus, this present study focuses on the translation process undertaken by professional translators from HPI (Association of Indonesian translators) in translating a scientific article. Specifically, this study is intended to answer the following research questions: (i) How does the professional translator manage the time in a translating a scientific article from Bahasa Indonesia into English? and (ii) What are the translation methods used by the professional translator in translating a scientific article from Bahasa Indonesia into English? The result of this study serves as a patron or correction in managing the time distribution in translating scientific articles.

METHOD
This study was conducted using a qualitative method that focused on finding problems and deeply understanding a central phenomenon development taking place during a translation process. In addition, a case study was used as the research method because this study was intended to intensively explore a single case, i.e., the process of the translation done by a professional translator.

Data and Participants
The data of this research were all the processes of translating the ST. They were in the form of linear representation from Translog-II and the screen

recording video from OBS Studio. The data source was a scientific article entitled "*Eksistensi Tradisi Lisan Cakap Lumat Dalam Upacara Adat Perkawinan Karo*" downloaded from https://journal.uny.ac.id/index.php/litera/article/view/30478, which was written by Meliana (2020). The ST was translated into English by the participant. The text was selected because it was a scientific article published in one of accredited national journals. Therefore, it contained many cultural terminologies requiring the translator's good translation skill and cultural knowledge. The participant was an Indonesian professional translator. Translating a scientific article is not an easy task, it requires experience and expertise in this field. Thus, the selection criteria of the Indonesian professional translator were: (i) having bahasa Indonesia as the mother tongue; (ii) having been working as a professional translator for at least 5 years; (iii) being a member of HPI (Association of Indonesian Translator); and (iv) having 500 or above TOEFL score.

Instruments

The researcher was assisted with the use of screen recording and keylogging tools. OBS Studio is screen recording software used to record all the activities done by the professional translator directly via screencast. OBS Studio offers further insight into the translation process and provides information about the pauses that the user makes. The screen recording tool recorded the translation process of the participant as a video file that showed the whole translation process. The method did allow for pause analysis, but to a limited extent. Unlike Translog, OBS Studio did not provide any numerical data, and therefore the timing of pauses had to be done manually by the researcher after data collection, using the player's pause function along with the program timer running on seconds. Similar to Translog, pauses in the screen recording data refer to breaks in the writing process, but the determination of a pause is based on moments during which nothing takes place on the screen. Therefore, pauses in the two kinds of data cannot be considered identical, since screen recording data provides information that is not present in Translog data, such as information search and dictionary look-ups.

The new technology in the translation process was developed by the adoption of keylogging programs that was Translog. Translog was developed by Jakobsen and Schou (1999) who defined it as a program to record and study the reading and writing process on a computer. The program registers all keystrokes, changes, deletions, additions, cut-and-paste operations, and cursor movements during the writing process. Translog also records timestamps, i.e., logs information about the exact time at which each keystroke operation is made thus enabling a numerical representation of the pause duration that occurs when typing. In this research, the Translog was

used as an instrument to obtain objective, digital data of human translation processes. To sum up, Translog was used to get the data in the form of both translation process and product.

Data Analysis Procedures
The data collected from Translog were analysed qualitatively through the following procedures. The data from Translog were condensed by focusing on the activities in each phase of translation process. The data from OBS Studio were condensed by focusing on online activities undertaken by the translator during the translation process. All of the data were then analyzed to find out the translation process done by the professional translator that included the time distribution for the activities in each phase of translation and the preference of using certain translation methods.

FINDINGS
The time distribution for each phase of the translation process was analyzed based on the typical translation activities in each of the phase. The pre-drafting phase was identified by the absence of writing activities on the Translog screen because it was the phase when the translator was reading to understand the ST. Once the writing started on the screen, the drafting phase began. The post-drafting phase was identified when the translation draft had been written by the translator.

The results describing the time distribution and the activities done by the professional translator in translating a scientific text are divided into three translation stages, including pre-drafting, drafting, and post-drafting. Based on the results of data analysis obtained from the Translog-II recordings, the professional translator distributed the time difference over the three translation stages, as displayed in Table 1 below.

Table 1. The total time spent by the professional translator

Pre-Drafting	Drafting	Post-Drafting	Total Duration
00:00:00	02:02:13	00:06:11	02:08:24

Based on the results displayed in Table 1, the professional did not spend his time in the pre-drafting stage. The data obtained from the keylogging tool (Translog-II) show that the professional translator only copied the ST and pasted the TT in the translation space of the Translog. In other words, he skipped reading the ST (common activities in the pre-drafting stage) before drafting. This result is strengthened by the data obtained from the screen recording tool (OBS Studio) showing that he copied the ST and pasted it in the translation space of Google Translate (GT). Then, the

translation provided by GT was copied and pasted in the translation space of the Translog.

A drafting stage is a phase in which the professional translator spent most of his time in translating the text. He spent 2 hours and 2 minutes for drafting the translation. This indicates that the drafting stage is the phase where the he encountered many problems in the translation process. The heavier the problems, the heavier the cognitive tasks performed by the translator. This eventually leads to more time consumption. Furthermore, he spent 6 minutes in the post-drafting stage. This indicates that the professional translator only did few translation activities in this phase.

Meanwhile, the results concerning the translation process activities of the professional translator are displayed in Figure 1.
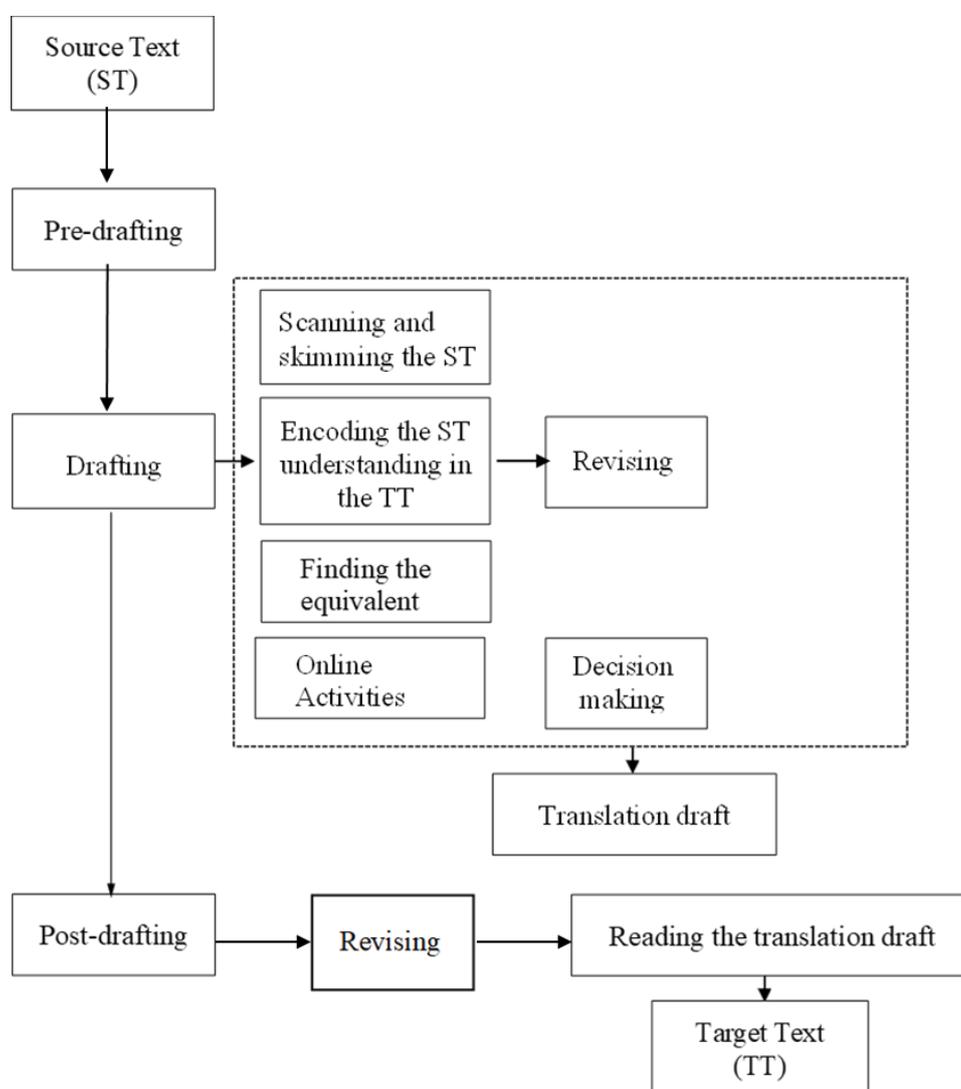
Figure 1. The translation process done by a professional translator

Based on the results displayed in Figure 1, in the pre-drafting stage, the professional translator did not read the source text (ST) at all; in other words, he skipped to the drafting stage. Almost all the translation processes were done in the drafting stage. He immediately translated the source text to the target text. During the drafting stage, he did the pre-drafting and post-drafting activities by scanning and skimming the source text, finding the equivalent, performing online activities to get more information or resources, and revising the translation draft simultaneously. Although there were some problems encountered in finding the right equivalent, it did not become a major problem to the professional translator.

Therefore, he often spent his time relying on his cognitive processes by encoding the source text and rewriting his understanding in the target text. He revised the draft to confirm whether it had been natural; in other words, the professional translator applied the linear and inline methods, two of the three methods of self-revisions suggested by Kourouni (2012). He solved the translation problems from word by word, sentence by sentence, and paragraph by paragraph. This indicates that the professional translator's self-revision is motivated by his efforts to provide the equivalent acceptable in the target language, instead of having vocabulary problems.

In addition, the results show that the professional translator seem to have heavy cognitive problems, indicated by the frequent long pauses during the translation process as displayed in Figure 2.
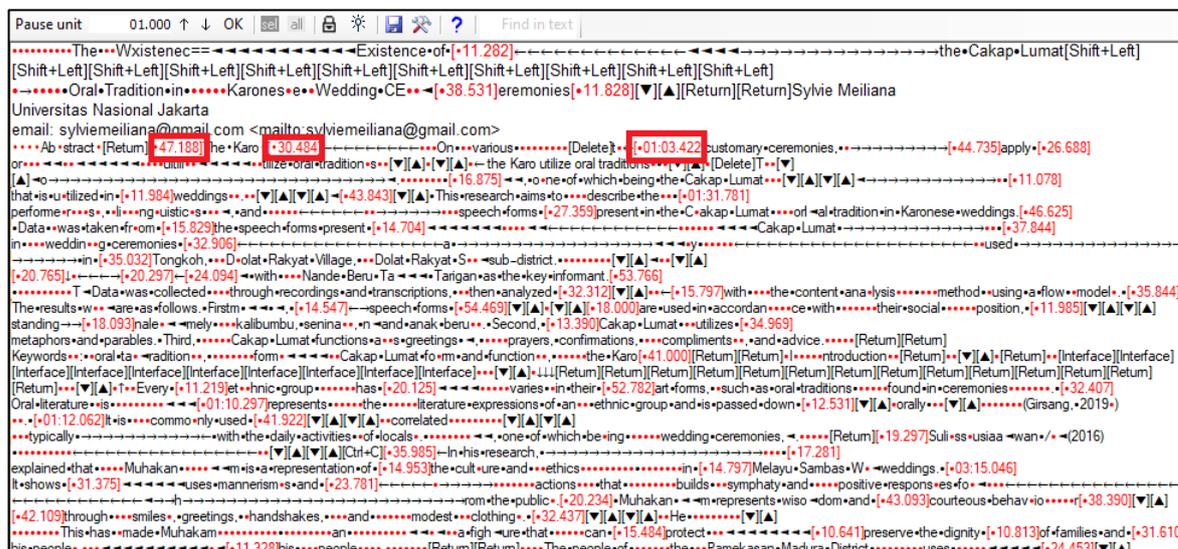
Figure 2. Frequency and length of pauses taken by the professional translator

Pauses are natural in translation process as they indicate cognitive efforts performed by a translator, as Rosa et al. (2018) found that even professional translators took frequent pauses in a translation process. The

results of this present study found that the pause taken by the professional translator was to solve the translation problems, such as reading or scanning the source text before translating the next paragraph and finding the appropriate equivalents for the target text (TT). Pauses are activities in the translation process, even a translator does various activities during pauses. Pauses are generally understood as a temporary stop or a break indicating doing nothing in a certain time. However, such understanding does not apply in the translation process. The longer the pauses were taken, the heavier the cognitive load was (Rosa et al., 2018).

Moreover, the results displayed in Figure 2 show that he spent 47 seconds skimming the source text to get the main idea, and he began drafting the TT. Then, he spent 30 seconds finding an appropriate equivalent in Google Translate (GT) and Google. He spent 1 minute and 1 second reading and encoding his understanding of the source text (ST) into the target text (TT). Meanwhile, the OBS showed the activities of the professional translator during the pauses of 30 seconds as displayed in Figure 3.
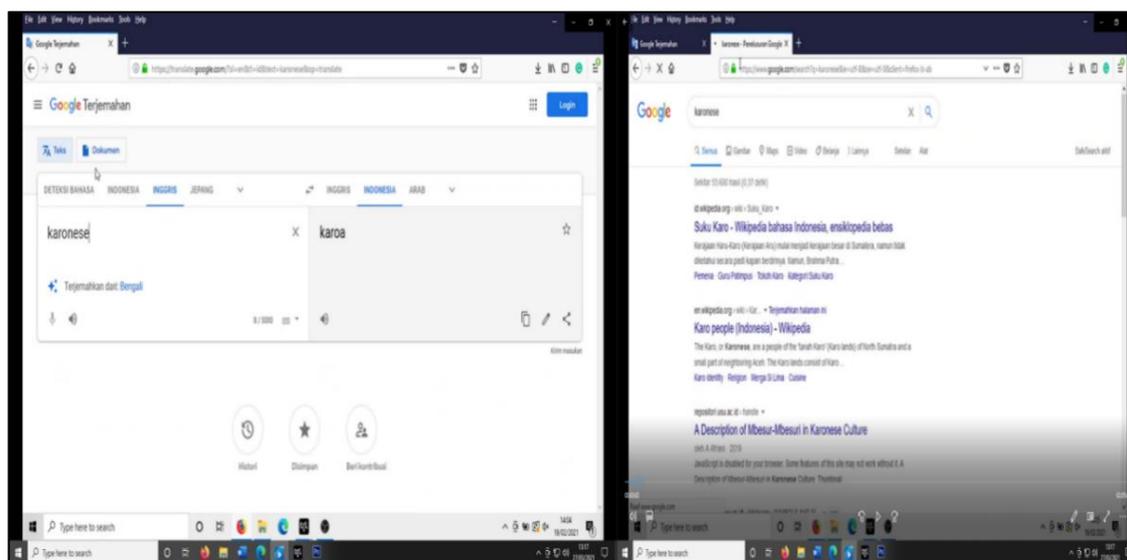
Figure 3. Recorded translation activities by OBS Studio

The results displayed in Figure 3 show how the professional translator took a pause to decide the acceptable equivalent of ST phrase '*masyarakat Karo*' in the TT. At first, he used the term '*masyarakat Karo*' as a keyword by using Google Translate (GT), then he used the word 'karonese' to find the equivalent. The GT provided the term '*karoa*' as the equivalent. Then, he used Google to provide him terminology of 'Karonese' which can be seen in Figure 2. When he found the terminology of the 'Karonese', he used 'the Karo' as the equivalent of '*masyarakat Karo*'. After taking a pause for 1 minute and 1 second, he decided to paraphrase the sentence which can be seen in (1):

(1) ST   : *Masyarakat Karo selalu menggunakan tradisi lisan dalam berbagai jenis kegiatan upacara adat. Salah satu bentuk tradisi lisan masyarakat Karo adalah Cakap Lumat yang digunakan dalam upacara adat perkawinan.*

First Draft : The Karo utilize oral traditions on various customary ceremonies, one of which being CakapLumat that is utilized in weddings.

Final Draft : The Karo utilize oral traditions on various ceremonies, one of which is CakapLumat that is utilized in weddings.

The paraphrase used by the professional translator in translating the text in (1) is by rewriting the two sentences in the ST in a single complex sentence in the final draft. In addition, he also deleted the meaning of 'adat' or 'customary' in the final draft. Such a deletion is acceptable because the words 'Karo' and 'tradition' in the sentence have indicated that the 'ceremonies' in this context must refer to traditional ceremonies.

Furthermore, the frequent pause taken by the professional translator is caused by his decision to prefer his background knowledge in finding the equivalent. This finding is line with Batubara (2018) who argues that good translators are more prepared to use their background knowledge and their inferences about the text and text type as a basis for their decisions. This happened during the translation process where the professional translator took the longest pause at 3 minutes and 15 seconds pauses. It was displayed in Figure 4 below.
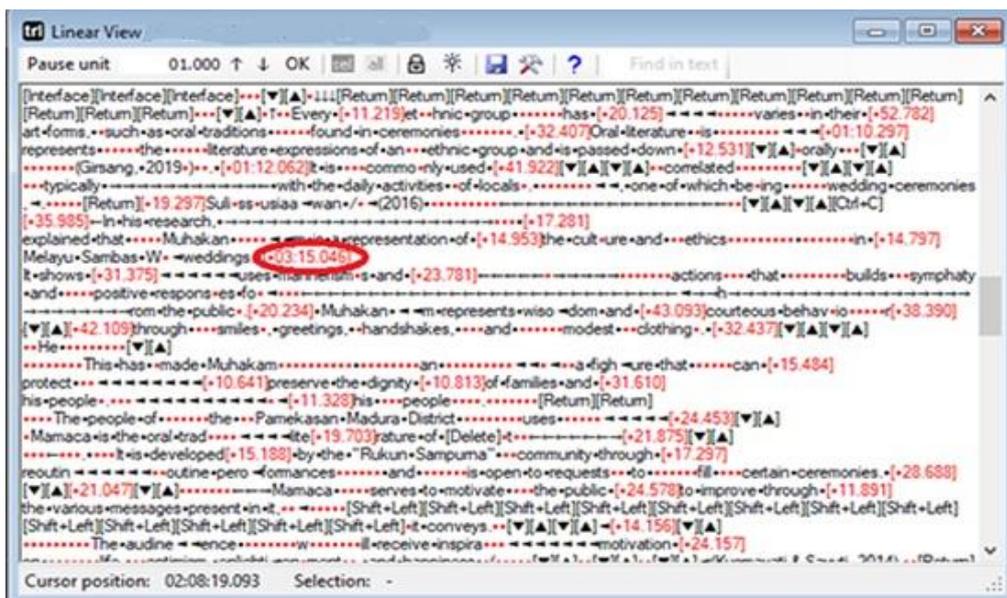
Figure 4. The longest pause is taken by a professional translator

The results of analysis of the data obtained from Translog-II and OBS Studio show that the professional translator did not do anything before he decided to use the word "weddings" as the equivalent of the ST phrase "*upacaraadatperkawinan*". This indicates that the professional translator is rereading the source text to get information or the big picture of the sentences. The professional translator simplified the sentences to produce a target text (TT) draft. At this time, he spent all his 3 minutes, relying on his memory to figure out the best equivalent. As he began to start the drafting and by relying on his memory, he paraphrased those sentences and elaborated each sentence to simplify the translation. Thus, all those paraphrased sentences in TT final draft are represented as in (2):

(2) ST : *Peran Muhakam merupakan representasi adab dan etika dalam adat perkawinan Melayu Sambas. Ucapan Muhakam menggambarkan hati yang ikhlas, penuh kasih sayang, dan belaskasihan. Muhakam memperlihatkan strategi ikhlas, merendah diri, dan meminta maaf sebagai representasi adab dan etika Melayu. Adab dan etika Muhakam dalam acara majelis adat perkawinan Melayu ditunjukkan dengan sikap dan perilaku yang dapat menumbuhkan simpati dan respon yang baik dari masyarakat. Kebijaksanaan dan kesantunan dalam berperilaku ditunjuk- kan oleh Muhakam dengan senyum, bertegur sapa, berjabat tangan, dan adab berpakaian. Peran penting tersebut menjadikan seorang Muhakam dianggap sebagai sosok yang dapat menjaga marwah keluarga dan masyarakat.*

TT : He uses mannerisms and actions that builds sympathy and positive responses from the public. Muhakam represents wisdom and courteous behavior through smiles, greetings, handshakes, and modest clothing. This has made Muhakam a figure that can preserve the dignity of his family and people.

The TT in (2) is quite surprising because it contains much smaller number of words than does the ST. The TT seems the summary of the ideas delivered in the long sentences in the ST. This finding proposes the definition of translation as paraphrasing ideas in another different language. Nevertheless, it should be noted that the paraphrase should not reduce the message intended to be conveyed. Such paraphrasing is only possible when the translator does understand the ST.

Understanding the source text (ST) would give a better insight into the context. Although, the source text has many clauses and phrases that have similar meanings. This has become a challenge for the professional translator because it is not an easy task to provide the best translation to make the reader understand the content of the text. Since re-reading or scanning the source text has become an important task for the professional translator, this

develops the confidence when he started the target text (TT) draft. Also, this is the reason why the professional translator did not invest the time searching for terminology or equivalents for the target text (TT).

DISCUSSION

Even though the results indicate that the professional translator did not spend the time in the pre-drafting stage and a few minutes in the post-drafting stage, it does not mean that he did not do the pre-drafting activities or self-revisions. He did the pre-drafting and self-revision activities simultaneously with the drafting activities. This contradicts the results of the study done by Rosa (2017) who found that the professional translators tended to spend their time more in the post-drafting stage; in other words, they spent a long time on self-revision. The results of this present study then indicate that the professional translator is lack of time management in the translation process. Although doing the revisions simultaneously in the drafting stage has been allowed, the corrections were done at the clause level, paying less attention to the cohesiveness of the ideas within the paragraph or with other paragraphs in the text. It may eventually lead to a lack of understanding of the whole context of the text. Therefore, a translator is advisable to do self-revisions in a specified time allocation. This supports Brunette (2000) who emphasized the importance of providing a specific time allocation for the revision in the translation process because the revision stage is a stage in the translation process in which the entire translated text and the original text are carefully compared to ensure that the translation complies with previously defined methodological, theoretical, linguistic, textual and contextual criteria.

Furthermore, as the professional translator did revisions in the drafting stage, he did the revisions in a clause level. This very likely causes less cohesiveness of ideas in the target text. However, as a professional translator, he had his own way of avoiding such problem. While doing revisions in a clause level, his focus was still directed to meaning equivalence. He did revisions by taking the main message contained in the ST and rewrote it in his own style. The way he kept the source text's original meaning in the target text was the indicator that he did not imitate the source text style or structure. Such characteristics often become the factor that distinguish professional translators from non-professional or student translators (Rosa et al., 2018). His focus was on how to produce the target text rather than being dependent on the source text style.

Moreover, the linear and inline methods used by the professional translator confirm the translation method theory proposed by Korouni (2012). Nevertheless, the multi-directional or nonlinear method was not used by the professional translator. Thus, the results of this study are in contrast with the study done by Pym (2011) who found that today's translators prefer to use a

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nonlinear method. He believes that technology directs readers of texts and translators to the paradigmatic or vertical axis of language, i.e., non-linearity.

CONCLUSIONS
The results of this study indicate that the professional translator spend most of his time in the drafting stage, whereas most professional translators spend their time more in the post-drafting stage. This leads to the conclusion that the time spent by translators in each stage of translation process cannot be used as the basis to distinguish professional translators from non-professional or novice translators. However, they can be distinguished based on the activities they do in each stage of translation process. Furthermore, from the results of this study it is concluded that the professional translator used linear and inline methods in doing self-revisions while translating a scientific article. Even though the professional translator did the revisions at the clause level, his understanding of the source text was very good which led him to produce a good translation product. The results of this study have proposed new ideas related to the time management in a translation process, i.e., time distribution in each translation phase does not characterize a certain level of a translator.

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