



A POST-EDITING OF TRANSLATION PROCESS BY GOOGLE TRANSLATE: METACOGNITIVE AND COGNITIVE STUDY

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ABSTRACT

This study aims (1) to analyze the translator's metacognitive and cognitive strategies during the post-editing of English-Indonesian Google Translate outputs and (2) to analyze the translator's metacognitive and cognitive strategies during the post-editing of Indonesian-English Google Translate outputs. This study was qualitative research. One person was involved in this study, and the data used were one translated Indonesian-English text and one translated English-Indonesian text. To analyze the data, several steps were taken: transcribing the video, analyzing the description, considering strategies, displaying findings, and concluding. Based on the findings, it was found that the metacognitive and cognitive strategies of English-Indonesian Google Translate outputs during post-editing include Identifying and Correcting Errors, Revising, and Rereading. Cognitive strategies, such as Elaborating Ideas, Contrasting, Summarizing, Self-Questioning, Identifying Key Ideas, Expressing Opinions, Reaffirming, Connecting Ideas, Selecting Ideas, Rewriting, and Looking for Information were also noted. Reasoning strategies were not found during the post-editing of the English-Indonesian text. For the metacognitive strategies used by the translator for Indonesian-English Google Translate outputs during post-editing, the following were identified: Identifying and Correcting Errors, Revising, and Rereading. Cognitive strategies included: Elaborating Ideas, Contrasting, Summarizing, Self-Questioning, Expressing Opinions, Reaffirming, Connecting Ideas, Selecting Ideas, Rewriting, and Looking for Information. Key ideas and strategies were not identified during the post-editing of the Indonesian-English translated text. Therefore, it can be concluded that post-editing using a translation machine like Google Translate is more accurate than others.

Keywords: Post-editing, Translation, Metacognitive and cognitive

INTRODUCTION

In this digital era, translation has transformed. It has transformed from traditional translation to digital translation using machine translation (known as MT). The machine can quickly translate from one language to another. There are now many kinds of machine translation, such as Google Translate, Microsoft Translate, and so on. Bowker and Ciro (2019, p. 37) argue that machine translation is an area of research and development where computational linguists try to find ways to use computer software to translate text from one natural language (e.g., Spanish) to another (e.g., English).

Unfortunately, many problems are also faced during translation from the source text (ST) to the target text (TT), such as grammatical errors, unreadable words, or texts. Since

natural languages are highly complex, machine translation is an extremely difficult task. Many words have multiple meanings, and sentences may have various possible interpretations, and certain grammatical structures in one language might not exist in or map clearly to another language (Bowker & Ciro, 2019, p. 37). Although the text has been translated automatically, checking the translation has to be conducted by a translator. The activity is known as post-editing. It is supported by Li and Lu (2021), who conclude that translation can be done in all texts, but the translation process should be considered precisely by using various strategies. Moreover, post-editing is suggested in every single translation process. Hence, the translator needs post-editing activity after translating a text because it does not fully depend on the machine-translation output.

Relating to the post-editing activity, a translator selects several words, phrases, or expressions suitable to use and is expected to gain minimum meanings of the source text through one activity. The activity is usually supported by a thinking process where translation strategies are done. That is metacognition. According to Haukås et al. (2018), the concept of metacognition came from John Flavell in 1976. He defines it as “one’s knowledge concerning one’s cognitive processes and products or anything related to them.” In the following year, as cited in Siregar (2021), Flavell (1979) claimed that the learner should learn cognitive strategies to create cognitive progress in the course. Moreover, the learner must learn metacognitive strategies to control the process.

In this study, the translator was investigated as a research object to explore the translator’s cognitive strategies during a post-editing. Relating to the strategies, one English-Indonesian and Indonesian-English from Google Translate output was chosen to examine it. To support this task, several previous studies were selected. First, a study from Hashempour et al. (2015). They found no significant relationship between the degree of translation students’ metacognitive awareness and gender. In addition, a significant negative relationship between metacognitive awareness and educational level. Second, Hilma (2011) reported literal translation using Google Translate to translate text and concluded that Google Translate helps create basic understanding, but it produces a word-for-word translation. Besides that, unclear, unnatural, and nonsensical translations are found. It is suggested to re-check translations’ results. Third, Noviarini (2021), in research about translations results of Google Translate, found that GT is a tool that helps translators translate quickly, but it cannot read contexts and situations. Therefore, technical mistakes can happen structurally.

Two research questions were proposed to explore this study: (1) What metacognitive and cognitive strategies does the translator use during the post-editing of English-Indonesian Google Translate outputs? and (2) What metacognitive and cognitive strategies are used during post-editing of Indonesia-English Google Translate outputs?

REVIEW OF THE LITERATURE

Translation in Theory

The translation is the process of transferring meaning from a source to a target language. The focus of translation is transferring source text (ST) to target text (TT), where there is a process involved in cognitive, linguistic, social, cultural, and technological (Hatim & Munday, 2019; Moorkens et al., 2018). In addition, three types of written translation are (1) intralingual translation. It translates within the same language, (2) interlingual translation. It translates from one language to another, and (3) intersemiotic translation. It translates a verbal sign into a non-verbal sign. When a translation is taught, there are two goals in translation, namely (1) learners are able to evaluate their translation task theoretically and practically, and (2) learners can manage their translation project individually (Praet & Verhelst, 2020).

From those explanations, it can be concluded that translation is an activity that shifts a language, known as a source language, to a target language. It can be done verbally or in writing. Besides that, there are three translation areas: intralingual, interlingual, and intersemiotic translation.

Post-Editing Activities in Translation

Post-editing is an editing process after translating a text to check the acceptability and readability of the translated text by a translator. Allen in Hu & Cadwell (2016) divides levels of post-editing into (1) *Inbound*. It consists of MT with post-editing and rapid post-editing (2) *Outbound*. It consists of MT with no post-editing, minimal post-editing, and full post-editing. Discussing strategies used, three levels strategies in post-editing, namely (1) lexical level. It focuses on choosing the correct expression of terminologies and right word meaning based on the context, (2) syntactic level. It focuses on transforming an active voice into a passive voice, segmenting and reorganizing the sentence structure, adjusting the word order, and (3) discourse level. It focuses on supplementing logical words.

From those explanations, it can be said that post-editing activities in translation can be done inbound and outbound. It depends on the level needed to translate a text by identifying lexical, syntactic, and discourse levels.

Metacognition Theory in Translation

Based on history, modern research in metacognition has two parallel roots, one in the emerging cognitive psychology of the 1960s (e.g., Hart, 1965) and the other in the post-Piagetian developmental psychology of the 1970s (e.g., Flavell, 1979) (Perfect & Schwartz, 2002). Haukås et al. (2018) write that Flavell in 1979 divides three domains of metacognition, namely: (1) metacognitive knowledge. Knowledge of oneself and others as cognitive processors, including knowledge and beliefs about what people think they can and cannot do well, (2) metacognitive experiences. Any conscious cognitive or affective experience accompanying and about any intellectual enterprise, and (3) metacognitive strategies. It refers to the deliberate use of methods to control one's cognition.

In translation, metacognition involves several strategies, such as (1) planning. It relates to what a translator needs to post-edit, then deciding how to conduct it, (2) monitoring. It relates to how a translator is doing a post-editing of MT output, what the translator has post-edited or not, and whether the translation strategies used are helping effectively or not, and (3) evaluation. It relates to conducting a reflection on how well a translator meets their goals after doing translation (Siregar, 2021) (see Figure 1).

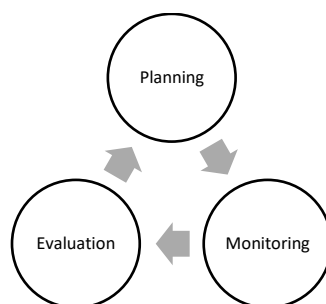


Figure 1 Metacognition Strategies

Larenas et al. (2017) also shows taxonomy writing strategies involving three areas, as is shown in Figure 2, as follows:

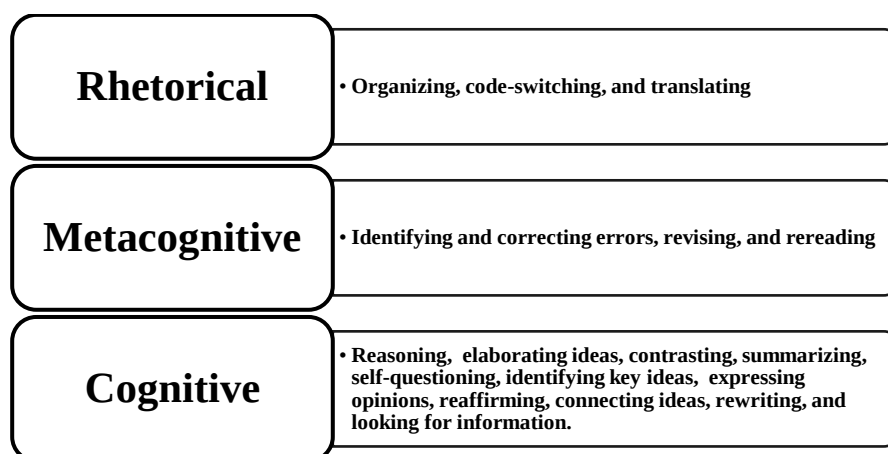


Figure 2 Rhetorical, Metacognitive, and Cognitive Strategies
(Cited from *(Larenas et al., 2017)*)

Based on the explanations above, it can be concluded that metacognition theory is a way of thinking by someone. Three strategies are involved if related to translation activity: (1) planning. A translator needs before doing post-editing, (2) monitoring. A translator is doing a post-editing and (3) evaluation. A translator evaluates their translated text after doing a post-editing. In this research, the researcher adapted (Larenas et al., 2017; Siregar, 2021) to analyze two texts that Google Translate has translated by focusing on Metacognitive and Cognitive strategies.

Compared with previous studies mentioned (see Hashempour et al., 2015; Hilma, 2011; Noviarini, 2021; Sugiarto & Siregar, 2023), metacognitive and cognitive strategies have not been explored further. Previous studies just focus on the lower level (e.g., student) and machine translation (e.g., Google Translate) and do not include a translator's mind during post-editing by utilizing metacognitive and cognitive processes. Therefore, this study aims to add a body of knowledge about translation itself from a translator's metacognitive and cognitive process.

METHODOLOGY

This study employed qualitative research. It relates to any strategies to investigate relationships, activities, and materials quality (Fraenkel et al., 2012). Two reasons to choose the qualitative method: (1) data consists of transcription data during a post-editing text, and (2) findings of the data were analyzed qualitatively. As the translator, one participant was involved in this project, namely MGP. His name is a pseudonym to keep his confidentiality. He is a doctor of Applied English Linguistics from one university in

Pontianak, East Kalimantan and has many experiences as a translator for years. The consideration of involving only one translator is (1) the readiness of the participant, (2) the ability to do post-editing process of translating a text, and (3) the comprehension of metacognitive and cognitive strategies.

Discussing data source used in this study, namely (1) one translated Indonesian-English text (11 lines) and (2) one translated English-Indonesian text (9 lines). Besides that, the researcher employed observation by inviting the participant to conduct a post-editing for the two translated texts in collecting data. When the participant was conducting the post-editing, it was recorded verbally into a video format using the zoom application for approximately 30 minutes. In analyzing data, several steps were completed. First, the researcher transcribed the video into a transcription format that has been prepared. Second, the researcher analyzed the transcription one by one. Third, the researcher considered strategies conducted in the transcription by using metacognitive theory. Forth, the data were displayed in the findings and discussion part. Last, the researcher concluded it in the conclusion part.

FINDINGS AND DISCUSSION

Findings

English-Indonesia Google Translate Outputs

This part explains the post-editing process in English-Indonesia Google Translate outputs that the researcher has analyzed. It explains (1) metacognitive strategies and (2) cognitive strategies, as follows:

Metacognitive Strategies

This part shows metacognitive strategies during post-editing English-Indonesia Google Translate outputs by concerning on (1) identifying and correcting errors, (2) revising, and (3) rereading, as shown in Chart 1:

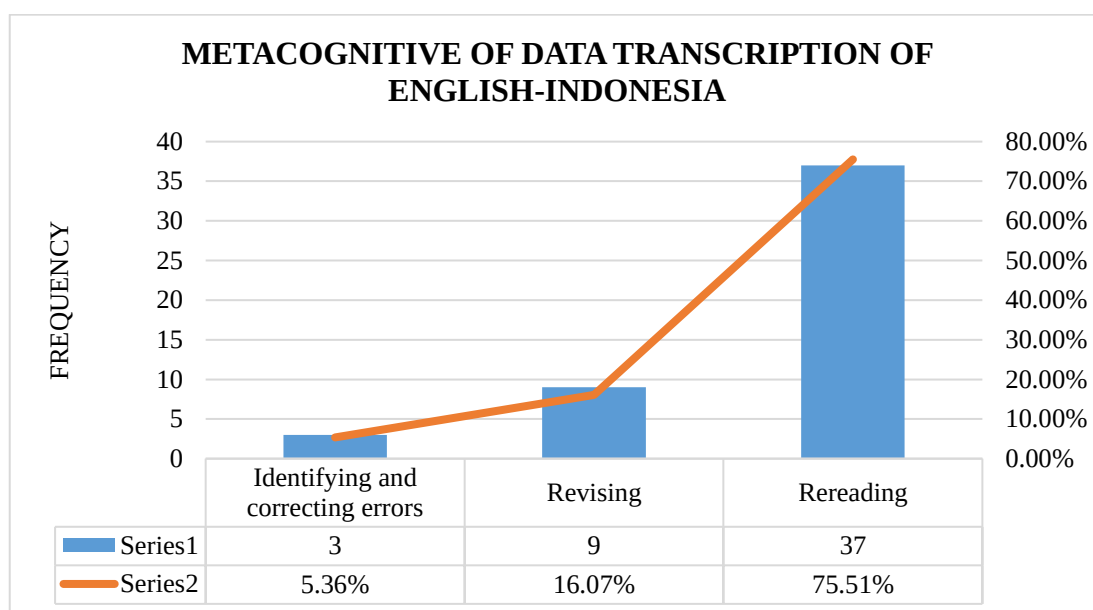


Chart 1 Metacognitive of Data Transcription of English-Indonesia

Most metacognitive strategies conducted by MGP as the translator during post-editing are rereading, while the other strategies conducted are revising, identifying, and correcting errors (see Chart 1).

Identifying and correcting errors

This part shows transcription data of identifying and correcting errors strategies done by MGP as the translator during post-editing, as follows:

Table 1 Identifying and Correcting Errors Strategies of English-Indonesia Google Translate Output

Time Stamps	Transcription
01:00-01:15	<i>Okay pertimbangannya asumsi pertama realisme adalah bahwa negara, bahwa bangsa-bangsa (biasanya disingkat 'negara') adalah prinsip aktor dalam hubungan internasional</i>
01:16-01:30	<i>Kayanya enggak terlalu nyambung dengan yang pertama, jadi saya buat saja menjadi</i>
05:31-05:45	<i>Terutama di masa perang, terutama... ya terutama di masa perang memimpin negara untuk berbicara dan bertindak dengan satu suara....Dari semuanya saya rasa... memimpin ya</i>

The transcription data showed that the researcher MGP as the translator who did three identifying and correcting errors strategies during post-editing. The strategies were done by identifying and correcting errors from several words or sentences of the translated text that had inappropriate meanings in the Indonesian language. It makes it hard to understand by the reader (see Table 1).

Revising

This part shows transcription data of revising strategies done by MGP as the translator during post-editing, as follows:

Table 2 Revising Strategies of English-Indonesia Google Translate Output

Time Stamps	Transcription
01:31-01:45	<i>Prinsip aktor tapi aktor prinsip (Mengubah penempatan kata "prinsip aktor" menjadi "aktor prinsip" pada bagian 1)</i>
02:46-03:00	<i>di ganti aja deh, ada juga badan-badan lain.</i>
07:16-07:30	<i>Kepentingan nasional terutama di masa perang, men... mendorong aja deh, mendorong negara untuk berbicara dan bertindak dengan satu suara, okay jadi, kata Lead saya terjemahkan jadi.</i>
11:31-11:45	<i>Eh here, here itu bukan mengacu pada kata disini ya here ya, sepertinya disini ini kurang pas ya harus ganti, mungkin dalam, eh dalam hal ini.</i>
13:01-13:15	<i>That universals exist outside the mind. A theory... eh... mungkin kita bisa mengganti, menambah kata paham.</i>
13:46-14:00	<i>Eh... saya rasa kata ini tidak cocok ya, ganti. Saya ganti menjadi apapun, apapun persuasi politik mereka.</i>
15:46-16:00	<i>Ini kata "untuk" saya ganti dengan "agar" agar bertahan hidup dalam lingkungan yang kompetitif, nah... menganggap... Oke.</i>
17:31-17:45	<i>Tentang... kata "tentang" ini saya ganti aja dengan "terkait" ya. Terkait tidak ada yang bisa dihubungi dalam keadaan darurat.</i>
19:16-19:30	<i>Ini sendiri saya ganti dengan saja. Di negara bagian kita saja, kita biasanya memiliki pasukan polisi, police force ya, bukan polisi (Mengganti kata "sendiri" dengan kata "saja" pada kalimat bagian 10)</i>

The transcription data showed that the researcher classified that MGP as the translator who did nine revising strategies during post-editing. This strategy was done by revising several words of the translated text that had inappropriate meaning in the Indonesian language (see Table 2). For example, (1) '*prinsip aktor*' is revised to '*aktor prinsip*', (2) '*untuk*' is revised to '*agar*', (3) '*tentang*' is revised to '*terkait*', and (4) '*sendiri*' is switched to '*saja*'.

Rereading

This part shows transcription data of rereading strategies done by MGP as the translator during post-editing, as follows:

Table 3 Rereading Strategies of English-Indonesia Google Translate Output

Time Stamps	Transcription
00:45-01:00	<i>Is that the nation state (usually abbreviated to 'state') is the principle actor in international relationship eh relation</i>
01:01-01:15	<i>Asumsi pertama... realisme</i>
01:46-02:00	<i>Faktor prinsip adalah dalam hubungan internasional, di ulang lagi, asumsi realisme pertama adalah bahwa negara-negara.</i>
03:16-03:30	<i>ada juga badan-badan lain seperti individu dan organisasi tapi kekuasaan mereka terbatas.</i>
03:31-03:45	<i>Kemudian saya ke line yang ke-3. Second, the state is a unitary actor, disini, negara adalah aktor persatuan.</i>
04:46-05:00	<i>Negara bangsa, adalah aktor prinsip dalam hubungan internasional, ada juga badan-badan lain seperti individu dan organisasi tetapi kekuasaan mereka terbatas. Tiga, asumsi kedua.</i>
05:01-05:15	<i>Kemudian kita masuk ke... line ke-4. National interests, especially in times of war, lead the state, lead to the state.</i>

07:31-07:45	<i>Mendorong, em... kepentingan nasional terutama di masa perang, mendorong negara untuk berbicara dan bertindak dengan satu suara, oke.</i>
07:46-08:00	<i>Kita masuk ke line 5. Third decision-makers are rational actors in the sense that.</i>
08:01-08:15	<i>Rational decision-making leads to the pursuit of the national interest, ketiga. Ketiga, pengambilan keputusan adalah aktor rasional.</i>
08:16-08:30	<i>Adalah aktor nasional, dalam arti bahwa pengambilan keputusan yang rasional mengarah pada pengejaran kepentingan nasional, emm.</i>
10:46-11:00	<i>Dalam arti bahwa pengambilan keputusan yang rasional mengarah pada pencapaian kepentingan nasional.</i>
11:01-11:15	<i>Here, taking action that would make your state weak or vulnerable would not be rasional. Disini, mengambil tindakan yang akan membuat negara anda lemah atau rentan tidak akan rasional</i>
11:46-12:00	<i>Mengambil tindakan yang akan membuat negara anda lemah atau rentan tidak akan rasional. Disini, mengambil tindakan yang akan membuat negara anda rentan tidak akan rasional. Would not be.</i>
12:16-12:30	<i>Realism suggests that all leaders, no matter what their political persuasion, recognise this as they attempt to manage their state's affairs in order to survive in competitive environment.</i>
13:16-13:30	<i>Paham realisme menunjukkan bahwa semua pemimpin... karena disini realism itu adalah subject ya, em... ya jadi menurut saya realisme.</i>
15:31-15:45	<i>Bisa jadi dalam mengelola urusan negara, untuk bertahan hidup dalam lingkungan yang kompetitif.</i>
15:46-16:00	<i>Paham realisme menunjukkan bahwa semua pemimpin adalah</i>
16:01-16:15	<i>Apapun daya Tarik politik mereka, menganggap ini sebagai usaha, usaha dalam mereka, mereka saya hapus, usaha dalam urusan negara agar mereka bertahan hidup dalam lingkungan yang kompetitif. Oke.</i>
16:16-16:30	<i>Okay jadi... bunyi nya agak sedikit natural, ya rasa cukup ya ini sudah. Paham realisme menunjukkan bahwa semua pemimpin apapun daya tarik politik mereka, menganggap ini sebagai usaha dalam mengelola urusan negara.</i>
16:31-16:45	<i>Agar bertahan hidup dalam lingkungan yang kompetitif.</i>
16:46-17:00	<i>Kita lanjut berikutnya, ke... baris ke-8. Finally, state live in a context of anarchy –that is, in the absence of anyone being in the charge internationally</i>
17:01-17:15	<i>Negara hidup dalam konteks anarki yaitu tanpa adanya siapapun yang bertanggung jawab secara internasional. Kalau lihat ini sepertinya... tidak ada masalah ya. Ini sudah oke, tidak ada masalah.</i>
17:16-17:30	<i>Saya lanjut ke... baris ke-9. The often used analogy of there being no one to call in an international emergency helps to underline this point. Analogi yang sering digunakan.</i>
18:31-18:45	<i>Analogi yang sering digunakan terkait tidak ada yang bisa dihubungi dalam keadaan darurat internasional membantu menegaskan hal ini. Okay, saya rasa cukup. Kita lanjut ke baris ke-10. Within our own state.</i>
18:46-19:00	<i>We typically have policy, police force, military, courts and so on. Di negara di bagian kita sendiri, kita biasanya memiliki pasukan militer, pasukan polisi.</i>
19:31-19:45	<i>Eh... ini kesatuan, kesatuan polisi, militer pengadilan dan sebagainya.</i>
20:01-20:15	<i>Kesatuan dia, iya. Oke, di negara bagian kita saja kita biasanya memiliki kesatuan polisi, militer, pengadilan dan sebagainya oke.</i>
20:16-20:30	<i>Sudah cukup, dan sekarang adalah baris yang terakhir, baris ke-11. In emergency, there is an expectation that these. Pelanggaran darurat ada harapan bahwa lembaga-lembaga ini akan, eh.</i>
20:31-20:45	<i>Institutions will do something in responses. Dalam keadaan darurat, ada harapan bahwa lembaga-lembaga ini akan melakukan sesuatu sebagai tanggapan.</i>
21:01-21:15	<i>Suatu eh... reaksi ya... Dalam keadaan darurat lembaga-lembaga ini akan melakukan.</i>
21:16-21:30	<i>Eh.... Akan melakukan... entar.</i>
21:31-21:45	<i>Akan melakukan eh suatu... eh... reaksi, dalam hal ini eh, dalam keadaan darurat ada harapan bahwa lembaga-lembaga ini akan suatu.</i>
21:46-22:00	<i>Reaksi, in an emergency, there is an expectation that these institutions will do something in responses. Oh... dalam keadaan darurat, lembaga-lembaga ini.</i>
22:31-22:45	<i>Dalam keadaan darurat lembaga-lembaga ini akan melakukan se... sesuatu sebagai reaksi, em... sebagai reaksi.</i>
22:46-23:00	<i>Untuk memecahkan, reaksi, reaksi.</i>

The transcription data showed that the researcher classified MGP as the translator who did thirty-nine rereading strategies during post-editing. This strategy was done by checking whether the translated text from Google Translate is appropriate in Indonesia (see Table 3). For example, one rereading strategy in minute 04:45-05:00: *Negara bangsa, adalah aktor prinsip dalam hubungan internasional, ada juga badan-badan lain seperti individu dan organisasi tetapi kekuasaan mereka terbatas. Tiga, asumsi kedua.*

Cognitive Strategies

This part shows cognitive strategies used during post-editing English-Indonesia Google Translate outputs by concerning on (1) reasoning, (2) elaborating ideas, (3) contrasting, (4) summarizing, (5) self-questioning, (6) identifying key ideas, (7) expressing opinions, (8) reaffirming, (9) connecting ideas, (10) selecting ideas, (11) rewriting, and (12) looking for information, as shown in Chart 2:

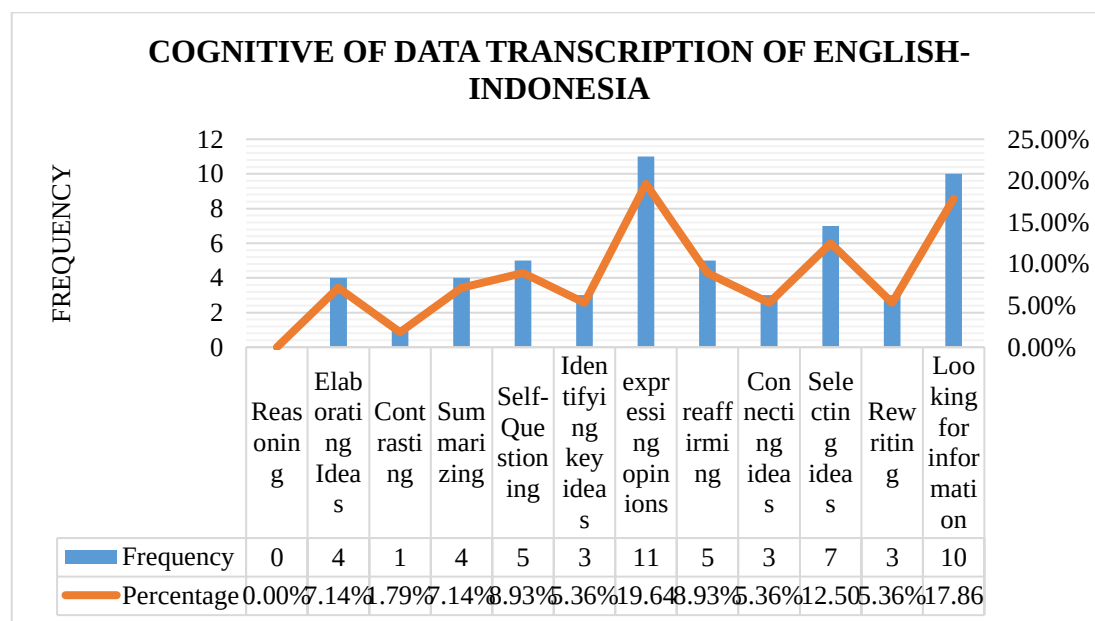


Chart 2 Cognitive of Data Transcription of English-Indonesia

Most of cognitive strategies conducted by MGP as the translator is expressing opinions and looking for information, while the other strategies are reaffirming, elaborating ideas, summarizing, selecting ideas, self-questioning, identifying key ideas, connecting ideas, rewriting, contrasting, and the last is reasoning (see Chart 2).

Elaborating Ideas

This part shows transcription data of rereading strategies done by MGP during post-editing, as follows:

Table 4 Elaborating Ideas Strategies of English-Indonesia Google Translate Output

Time Stamps	Transcription
04:01-04:15	<i>Ah coba masuk ke pertama, pertama ini the first assumption, berarti kedua ini juga mengarah pada asumsi, berarti sebaiknya saya letakkan asumsi kedua ya, asumsi kedua.... (adding a sentence "asumsi kedua" in part 3)</i>
04:16-04:30	<i>Nah jadi, tambahkan kata asumsi agar dia related dengan line yang pertama, asumsi kedua, negara adalah aktor kesatuan ya, tadi pertama adalah aktor prinsip sekarang aktor kesatuan.</i>
08:31-08:45	<i>Ketiga, eh... saya kembali ke yang kedua ya, saya kayanya tambahkan saja, asumsi kedua, pengambilan keputusan adalah.</i>
13:31-13:45	<i>Tidak cukup kalau hanya ada realisme saja, jadi ditambahkan paham realisme menunjukkan bahwa semua pemimpin ya, tidak peduli apa persuasi politik mereka, tidak peduli.</i>

The transcription data showed that the researcher classified M MGP as the translator who did five rereading strategies during post-editing. The strategies were done by rereading the translated text from Google Translate because several words and sentences need elaborating, so meanings from the source text could be reached (see Table 4). For example, one strategy in minute 04:00-04:15: *Ah coba masuk ke pertama, pertama ini the first assumption, berarti kedua ini juga mengarah pada asumsi, berarti sebaiknya saya letakkan asumsi kedua ya, asumsi kedua.... (adding a sentence "asumsi kedua" in part 3).*

Contrasting

This part shows transcription data of contrasting strategies done by MGP during post-editing, as follows:

Table 5 Contrasting Strategies of English-Indonesia Google Translate Output

Time Stamps	Transcription
00:16-00:30	<i>English is the source text, and Indonesia is the target text and... there have been google translate output in this table, end.... eh I want to compare and postedit.</i>

The transcription data showed that the researcher classified MGP as the translator who did only one contrasting strategy during post-editing. This strategy was done by comparing the translated text by google translate and the edited text by MPG whether the translated text is appropriate in Indonesia (see Table 5).

Summarizing

This part shows transcription data of summarizing strategies done by MGP during post-editing, as follows:

Table 6 Summarizing Strategies of English-Indonesia Google Translate Output

Time Stamps	Transcription
02:01-02:15	<i>Biasanya disingkat negara adalah faktor aktor prinsip dalam hubungan</i>

	<i>internasional, okay, aktor prinsip, ya saya rasa ini sudah benar.</i>
03:31-03:45	<i>Okay, dan ini saya rasa sudah cukup ya.</i>
04:31-04:45	<i>Oke, yang ke-3 juga sudah oke, asumsi realisme adalah negara-negara</i>
18:16-18:30	<i>To put emphasis oh ya, put emphasis menggaris bawahi itu menegaskan.</i>

The transcription data showed that the researcher classified MGP as the translator who implemented four summarizing strategies during post-editing. The strategy involved outlining MGP's post-editing results (see Table 6). For example, one strategy in minute 04:31-04:45: *Oke, yang ke-3 juga sudah oke, asumsi realisme adalah negara-negara.*

Self-Questioning

This part shows transcription data of self-questioning strategies done by MGP during post-editing, as follows:

Table 7 Self-Questioning Strategies of English-Indonesia Google Translate Output

Time Stamps	Transcription
03:46-04:00	<i>Kalau menurut saya, kata kedua itu berdiri sendiri, tidak ada relevansi nya, supaya dia relevan, related gimana ya</i>
02:45-03:00	<i>Kaya nya ini modulation ya, modulation ya, badan-badan lain juga ada, atau...</i>
14:16-14:30	<i>Of persuading, persuading artinya ya itu persuading. Eh... apapun eh... persuasi politik mereka ya, daya Tarik politik mereka ya.</i>
19:01-19:15	<i>Militer, pengadilan dan sebagainya. Ini apa ya, kok agak nya rancu ini, di negara bagian kita, di negara bagian kita.</i>

The transcription data showed that the researcher classified MGP as the translator who did four self-questioning strategies during post-editing. The strategies were done by questioning whether the translated text's word choice was appropriate (see Table 7). For example, one self-questioning in minute 03:46-04:00: *Kalau menurut saya, kata kedua itu berdiri sendiri, tidak ada relevansi nya, supaya dia relevan, related gimana ya.*

Identifying Key Ideas

This part shows transcription data of identifying key ideas strategies done by MGP during post-editing, as follows:

Table 8 Identifying Key Ideas Strategies of English-Indonesia Google Translate Output

Time Stamps	Transcription
08:46-09:00	<i>Aktor rasional, aktor rasional, dalam arti bahwa pengambilan keputusan yang rasional mengarah, disini kata lead ya.</i>
09:01-09:15	<i>Mengarah, mengarah pada pengejaran kepentingan nasional. Em... mengarah pada eh pengejaran.</i>
11:16-11:30	<i>Rasional, taking action that would make your state weak or vulnerable would not be rasional. Disini ya</i>

The transcription data showed that the researcher classified MGP as the translator who did four self-questioning strategies during post-editing. Those strategies were done by questioning whether the word choice in the translated text is appropriate or not (see

Table 7). For example, one self-questioning in minute 03:46-04:00: *Kalau menurut saya, kata kedua itu berdiri sendiri, tidak ada relevansi nya, supaya dia relevan, related gimana ya.*

Expressing Opinions

This part shows transcription data of expression opinions strategies done by MGP during post-editing, as follows:

Table 9 Identifying Key Ideas Strategies of English-Indonesia Google Translate Output

Time Stamps	Transcription
01:15-01:30	<i>Asumsi pertama realisme, oke sepertinya mau dipindahkan saja ya di translate, ini sepertinya harus di transportation</i>
03:46-04:00	<i>Kalau menurut saya, kata kedua itu berdiri sendiri, tidak ada relevansi nya,</i>
06:46-07:00	<i>To have a margin over, megarahkan, saya rasa ini mengarahkan ya, coba kita.</i>
10:16-10:30	<i>Mungkin dia pencapaian ya, pengambilan keputusan yang rasional mengarah pada pencapaian kepentingan nasional</i>
10:31-10:45	<i>Kayanya pencapaian deh.</i>
13:16-13:30	<i>Paham realisme menunjukan bahwa semua pemimpin... karena disini realism itu adalah subject ya, em... ya jadi menurut saya realisme.</i>
14:31-14:45	<i>Kayanya persuasi itu bisa di ganti dengan daya Tarik politik mereka, mengakui ini ketika mereka berusaha untuk mengelola urusan negara mereka untuk bertahan hidup dalam lingkungan yang kompetitif.</i>
17:00-17:15	<i>Negara hidup dalam konteks anarki yaitu tanpa adanya siapapun yang bertanggung jawab secara internasional. Kalau lihat ini sepertinya... tidak ada masalah ya. Ini sudah oke, tidak ada masalah.</i>
19:46-20:00	<i>Force, setau saya force itu artinya kesatuan ya angkatan ya, physical strength, power oh ya power ya</i>
22:01-22:15	<i>Eh... modulkan aja deh, saya gunakan modulkan aja, lembaga-lembaga ini, eh... diharapkan deh, diharapkan.</i>
23:01-23:15	<i>Untuk memecahkan masalah (Menambahkan kalimat "untuk memecahkan masalah" di akhir pada kalimat bagian 11). Supaya saya melakukan modulation aja karena saya ingin mendapatkan hasil yang lebih netral. Oke, saya rasa cukup, thank you very much.</i>

The transcription data showed that the researcher classified MGP as the translator who did eleven expressing opinions strategies during post-editing. The strategies were done by giving several opinions on changing inappropriate words from the translated text in Indonesia (see Table 9). For example, one expressing opinions strategy in minute 03:46-04:00: *Kalau menurut saya, kata kedua itu berdiri sendiri, tidak ada relevansi nya.*

Reaffirming

This part shows transcription data of reaffirming strategies done by MGP during post-editing, as follows:

Table 10 Reaffirming Strategies of English-Indonesia Google Translate Output

Time Stamps	Transcription
07:01-07:15	<i>Mengarahkan negara untuk berbicara dan bertindak dengan satu suara, tapi rasanya belum ya.</i>
10:01-10:15	<i>Chase, pengejaran ya, pengejaran. Kita kembali, eh... mengarah pada pengejaran kepentingan.</i>
12:01-12:15	<i>Okay, Saya rasa cukup. Ini here di ganti dengan... oke. Kita lanjut ke... baris ke-7.</i>

18:31-18:45	<i>Analogi yang sering digunakan terkait tidak ada yang bisa dihubungi dalam keadaan darurat internasional membantu menegaskan hal ini. Okay, saya rasa cukup.</i>
20:01-20:15	<i>Kesatuan dia, iya. Oke, di negara bagian kita saja kita biasanya memiliki kesatuan polisi, militer, pengadilan dan sebagainya oke</i>

The transcription data showed that the researcher classified MGP as the translator who did five reaffirming strategies during post-editing. The strategies reaffirmed the translated text's words or sentences in Indonesia (see Table 10). For example, one expressing opinions strategy in minute 12:00-12:15: *Okay, Saya rasa cukup. Ini here di ganti dengan... oke. Kita lanjut ke... baris ke-7.*

Connecting Ideas

This part shows transcription data of connecting ideas strategies done by MGP during post-editing, as follows:

Table 11 Connecting Ideas Strategies of English-Indonesia Google Translate Output

Time Stamps	Transcription
02:31-02:45	<i>Kemudian, badan-badan lain ada eh... seperti individu dan organisasi, tetapi kekuasaan mereka terbatas. Emmm... saya lebih cenderung mau menggunakan apa ya</i>
03:01-03:15	<i>Seperti individu dan organisasi tapi kekuasaan mereka terbatas, ya karena kalau other bodies badan-badan lain pada eh...</i>
05:01-05:15	<i>Negara adalah aktor kesatuan, nyambung ya ini ya.</i>

The transcription data showed that the researcher classified MGP as the translator who did three connecting ideas strategies during post-editing. The strategies were done by adding one idea in the translated text with other ideas found, so a suitable meaning can be reached in the Indonesian language translation (see Table 11). For example, one connecting ideas strategy in minute 05:00-05:15: *Negara adalah aktor kesatuan, nyambung ya ini ya.*

Selecting Ideas

This part shows transcription data of connecting ideas strategies done by MGP during post-editing, as follows:

Table 12 Selecting Ideas Strategies of English-Indonesia Google Translate Output

Time Stamps	Transcription
06:01-06:15	<i>To direct, to serve as a channel for, to guide on a way, to direct, to serves,</i>
06:15-06:30	<i>To go through emmm.... To direct operations, to have charge emmm... to have charge, oke... kata memimpin negara.</i>
13:01-13:15	<i>That universals exist outside the mind. A theory... eh... mungkin kita bisa mengganti, menambah kata paham.</i>
14:45-15:00	<i>Em... mengakui ini ya recognise this ya mengakui ini, mengakui ini this ya</i>
15:01-15:15	<i>Ketika mereka bukan, eh menganggap mereka ini sebagai usaha ya.</i>
15:15-15:30	<i>Menganggap, menganggap... ini sebagai usaha mereka.</i>
18:01-18:15	<i>Artinya to mark, to put, to show ya. Outline horizontal ya.</i>

The transcription data showed that the researcher classified MGP as the translator who selected ideas during post-editing. The strategies were done by looking for one word's meaning in the English or Indonesian language, then selecting one appropriate definition from several choices (see Table 12). For example, one selecting ideas strategy in minute 06:00-06:15: *To direct, to serve as a channel for, to guide on a way, to direct, to serves.*

Rewriting

This part shows transcription data of rewriting strategies done by MGP during post-editing, as follows:

Table 13 Rewriting Strategies of English-Indonesia Google Translate Output

Time Stamps	Transcription
04:01-04:15	<i>Ah coba masuk ke pertama, pertama ini the first assumption, berarti kedua ini juga mengarah pada asumsi, berarti sebaiknya saya letakkan asumsi kedua ya, asumsi kedua.... (Adding a sentence "asumsi kedua" in part 3)</i>
05:31-05:45	<i>Lead the state to speak and act with one voice. Kepentingan nasional... saya copy dulu deh, copy... paste.... Kepentingan nasional.</i>
20:31-20:45	<i>Institutions will do something in responses. Dalam keadaan darurat, ada harapan bahwa lembaga-lembaga ini akan melakukan sesuatu sebagai tanggapan. Coba copy.</i>

The transcription data showed that the researcher classified MGP as the translator who did three rewriting strategies during post-editing. The strategies were done by rewriting translated words or sentences into a table to conduct a post-editing (see Table 13). For example, one rewriting strategy in a minute: 05:31-05:45: *Lead the state to speak and act with one voice. Kepentingan nasional... saya copy dulu deh, copy... paste.... Kepentingan nasional.*

Looking for Information

This part shows transcription data of looking for information strategies done by MGP during post-editing, as follows:

Table 14 Looking for Information Strategies of English-Indonesia Google Translate Output

Time Stamps	Transcription
02:16-02:30	<i>Eh... kita ke line ke-2, other bodies exist, such as individual and organization, eh... other bodies... such as individual and organization but their power is limited</i>
05:46-06:00	<i>Kata Lead, lead itu... coba kita lihat kata lead itu artinya apa, to guide on a way ya... (while opening meaning of a word 'lead' in merriam-webster dictionary website).</i>
06:31-06:45	<i>Kata memimpin negara, lead the state, tadi eh... to go at the head of mungkin to be first in or among (Membuka meaning dari kata "Lead" pada website Merriam-Webster).</i>
09:16-09:30	<i>Coba, pursuit itu apa ya, pengejaran, pencarian (looking for meaning of "pursuit" in google translate).</i>
09:31-09:45	<i>Pencarian em.... Oke ada lagi, pemburuan, pengusiran. Coba, disini apa ya... (looking for meaning of "pursit" in Merriam-Webster Website).</i>
09:46-10:00	<i>Pursuit itu... the act of pursuing, an activity that one engages in as a vocation, professional or vocation or occupation. Eh.... synonyms ini apa ya.</i>
12:46-13:00	<i>Realism itu apa... em... realism itu concern for fact or reality. A doctrine, doctrine ya.</i>
14:01-14:15	<i>Eh... persuasi itu apa ya. Persuasion, persuasion... eh.... the act or process or an instance (looking for meaning of "persuasion" in Merriam-Webster Website).</i>

17:46-18:00	<i>Membantu, membantu... apa ya, eh... menggaris bawahi itu sama dengan apa ya, coba ita lihat underline, kata underline itu apa... eh underline (looking for meaning of "underline" in Merriam-Webster Website).</i>
20:46-21:00	<i>Paste... dalam keadaan darurat, dalam keadaan darurat ada harapan bahwa lembaga-lembaga ini akan melakukan suatu... apa nih.</i>

The transcription data showed that the researcher classified MGP as the translator who did ten looking for information strategies during post-editing. The strategies were done by looking for information from another source (e.g., Meriam-Webster Dictionary, KBBI, etc.) to match appropriate words or sentences in the Indonesian language (see Table 14). For example, one looking for information strategy in minute 05:46-06:00: *Kata Lead, lead itu... coba kita lihat kata lead itu artinya apa, to guide on a way ya... (while opening meaning of a word 'lead' in Merriam-webster dictionary website).*

Indonesia-English Google Translate Outputs

This part explains the post-editing process in Indonesia-English Google Translate outputs that the researcher has analyzed. It explains into (1) metacognitive and (2) cognitive.

Metacognitive Strategies

This part shows the metacognitive process during post-editing Indonesia-English by concerning on (1) identifying and correcting errors, (2) revising, and (3) rereading, as shown in Chart 3:

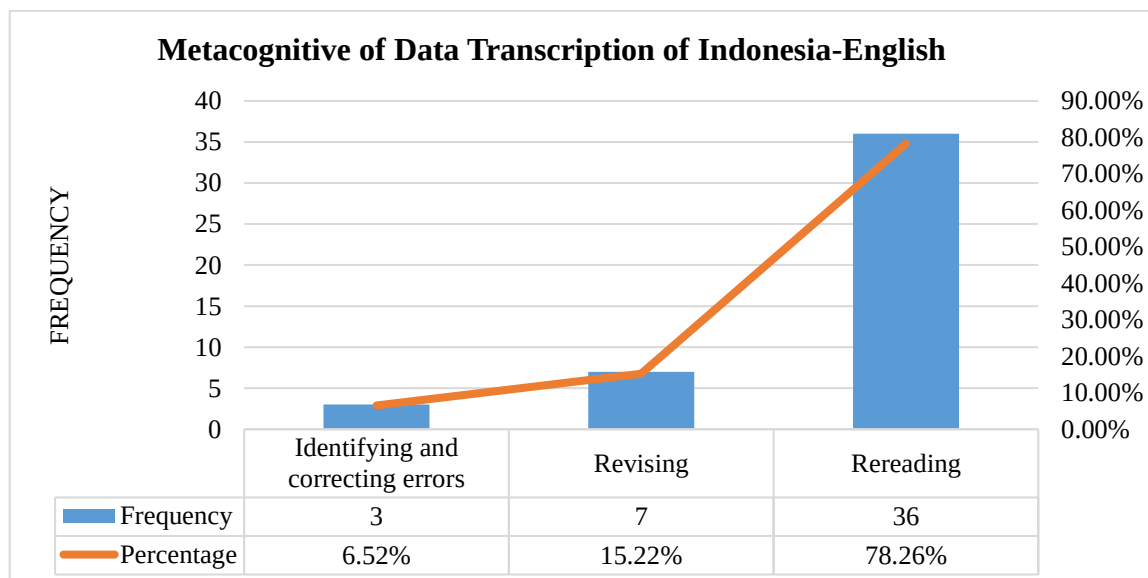


Chart 3 Metacognitive of Data Transcription of Indonesia-English

A majority of metacognitive done by MPG during post-editing were rereading, while the rest strategies done were revising and identifying correcting errors (see Chart 3).

Identifying and Correcting Errors

This part shows transcription data of identifying and correcting errors strategies done by MGP during post-editing, as follows:

Table 15 Looking for Information Strategies of Indonesia-English Google Translate Output

Time Stamps	Transcription
06:46-07:00	<i>Okay, sebagai dasar, is the basis, dasar pembangunan sistem, basis for building a just political system, saya rasa ini enggak ada masalah ya.</i>
16:01-16:15	<i>Em... menurut saya ini ya (Sambil memperbaiki kata "His" pada kalimat di bagian 7) jadi saya cari yang netral aja, ganti kata "His" dengan "The main".</i>
19:46-20:00	<i>Kayanya ada dua kata hubung deh jadi enggak cocok, for this reason ya, for this reason, makanya itu, meskipun ada dua disitu.</i>

The transcription data showed that the researcher classified MGP as the translator who identified and corrected errors during post-editing. This strategy was done by identifying and correcting errors from several words or sentences of the translated text that had inappropriate meanings in the Indonesian language. It makes it hard to understand by the reader. (see Table 15).

Revising

This part shows transcription data of revising strategies done by MGP during post-editing, as follows:

Table 16 Revising Strategies of Indonesia-English Google Translate Output

Time Stamps	Transcription
02:30-02:45	<i>Em... that ensuring one's individual rights to live. Oh disini life ya, karena dia adalah kata benda. Hak-hak seseorang untuk kehidupan sebenarnya. (Switching word "live" to "life" in part 1).</i>
12:16-12:30	<i>Can have a strong influence, influence on freedom at home, ya at home. Oke while this is a matter of domestic, eh... saya ganti aja kata "while"</i>
14:01-14:15	<i>Kita liat di "Ranah" ya, saya rasa ini sudah tapi ini ada suggestion (While typing suggestion in at home in the text) at home ya, sepertinya emang enggak bisa home. Oke home itu mengacu pada dalam negeri ya.</i>
17:16-17:30	<i>Em... coba coba, In fact, this military power has 2 (two) sides, eh... saya langsung aja deh, saya hapus namely it can used itu (sambil memblok tulisan "namely it can be used"). To fight foreign countries.</i>
18:16-18:30	<i>Atau disini bukan "It can be used" ya... "it is used" ya, it is used to fight foreign countries (Sambil memperbaiki kalimat "It can be used" menjadi "It is used" pada bagian 8).</i>
19:01-19:15	<i>Also... can bu used to oppress its own citizens, nah seperti ini saya rasa (Sambil mengganti kalimat "but it can also" menjadi "but also" pada bagian 8). In fact, this military power has 2 (two) sides, it is used not only to fight foreign countries, but also can be used to oppress its own citizens nah...</i>
20:46-21:00	<i>Often limit military power eh... in ways, "of" ini ya, in ways of, in ways of... saya ganti.</i>

The transcription data showed that the researcher classified MGP as the translator who did seven revising strategies during post-editing. This strategy was done by revising several words in the translated text that had inappropriate meanings in the English

language (see Table 16). For example, one revising strategy in minute 03:30-02:45 *Em... that ensuring one's individual rights to live. Oh disini life ya, karena dia adalah kata benda. Hak-hak seseorang untuk kehidupan sebenarnya. (While changing "live" to "life" in part 1).*

Rereading

This part shows transcription data of rereading strategies done by MGP during post-editing, as follows:

Table 17 Rereading Strategies of Indonesia-English Google Translate Output

Time Stamps	Transcription
00:31-01:00	<i>Ini liberalisme didasarkan pada argumen moral bahwa memastikan hak individu seseorang untuk hidup, kebebasan dan properti adalah tujuan tertinggi pemerintah.</i>
01:31-01:45	<i>Eh... hidup life... live eh... eh.... Seseorang untuk hidup.</i>
02:01-02:15	<i>Okay, liberalism is based on the moral argument that ensuring one's individual rights to live. Liberty and Property is the highest aim of the government.</i>
04:31-04:45	<i>That ensuring life, ensuring in one's individual life, liberty and property.</i>
05:46-06:00	<i>Aim of government, kayanya begini deh... Liberalism is based on moral argument that ensuring one's individual rights to live, liberty and property is the highest aim of the government.</i>
06:01-06:15	<i>Okay, lanjut ke kalimat kedua, konseskuensinya, kaum liberal menekankan kesejahteraan individu sebagai dasar pembangun sistem politik yang adil.</i>
06:16-06:30	<i>Em.... Consequently, liberals emphasize individual welfare as the basis for building a just political system.</i>
06:31-06:45	<i>As the basis for... sebagai dasar pembangunan sistem, as the basis for, em... basis for building eh... a just political system.</i>
07:16-07:30	<i>For building, serta pembangunan sistem politik yang adil is... As the basis eh...</i>
07:46-08:00	<i>Sistem politik yang ditandai oleh kekuatan yang tidak terkendali seperti monarki atau ketidaktatoran, tidak dapat melindungi kehidupan dan kebebasan warganya. Political system, google translatenya.</i>
08:46-09:00	<i>Monarki, such as Monarchies, kediktatoran, dictatorships, cannot protect the lives and freedom of their citizens, oke.</i>
09:16-09:30	<i>Perhatian utama liberalisme adalah membangun institusi yang melindungi kebebasan individu dengan membatasi dan mengontrol kekua.. kekuasaan politik, therefore.</i>
09:31-09:45	<i>Therefore... The main concerns of liberalism is to build institutions that protect individual freedom.</i>
09:46-10:00	<i>Yang mem... melindungi kebebasan individu dengan membatasi dan mengontrol kekuasaan politik, the main concern of liberalism.</i>
10:31-10:45	<i>By definite process or on a particular base, oke bisa, bisa ya, tapi disini, oleh karena itu therefore.</i>
11:16-11:30	<i>Ranah hubungan internasional juga penting bagi kaum liberal karena aktivitas negara diluar negeri dapat memiliki pengaruh kuat terhadap kebebasan di dalam negeri. Emmm... meskipun ini adalah masalah politik dalam negeri.</i>
12:01-12:15	<i>Ranah hubungan internasion juga penting, the realm of International relation is also important to liberal, karena aktivitas, because the activities of states abroad.</i>
12:46-13:00	<i>Okay even though this is a matter of, this is a matter of domestic politics the real of international relationship, that relation is also important to liberal because.</i>
14:46-15:00	<i>Militeristik, liberal were deeply disturbed by a militaristic foreign policy. Eh.</i>
15:16-15:30	<i>Kebijakan luar negeri yang militeristik em... oke. Lanjut ke baris ke-7. Perhatian utamanya adalah (Sambil membaca teks pada bagian 7)</i>
16:31-16:45	<i>Lanjut ke baris ke-8. Padahal kekuatan militer ini 2 (dua) sisi yakni dapat digunakan untuk memerangi negara asing (Sambil membaca teks pada bagian 8).</i>
16:46-17:00	<i>Tetapi juga dapat digunakan untuk menindas warganya sendiri. In fact, this military power has 2 (two) sides. Namely em.... (While reading a text in part 8).</i>

17:01-17:15	<i>Baiki dulu ya... two sides em... menurut saya, eh saya mau “simplify” aja deh, “yakni” nya nggak mau disebut. Namely it can be used to.</i>
18:46-19:00	<i>It is used not only to fight foreign countries but it also to be used to oppress, but also, ini but also.</i>
19:16-19:30	<i>Saya rasa seperti ini, kemudian yang terakhir yah, yang ke-9. Karena alasan ini, maka sistem liberalisme sering membatasi kekuasaan militer.</i>
20:31-20:45	<i>Over the military, ya... for this reason, for this reason political system rooted in liberalism often limit military power in ways eh.</i>
21:01-21:15	<i>In ways of ensuring civilian control over the military. Okay, baik. Saya cek lagi dari pertama, liberalism is the moral argument that ensure. (Sambil membaca ulang kalimat pada bagian 1).</i>
21:16-21:30	<i>One’s individual, ini ensure atau ensuring ya...that ensuring aja, kayanya emang that ensuring. Ini kan sudah ada, one’s individual rights to live, liberty an property is the highest aim of the government.</i>
21:31-21:45	<i>Em.... Hak individu seseorang untuk hidup, kebebasan dan property adalah tujuan tertinggi pemerintah.</i>
22:01-22:15	<i>Consequently, liberals emphasize individual welfare as the basis for building a just political system, okay...political system characterized by unrestrained powers, such as monarchies or dictatorships (Membaca ulang pada bagian 2 dan 3).</i>
22:16-22:30	<i>Cannot protect the live freedom of their citizens. Therefore, the main concerns of liberalism is to build institution that protect individual freedom by limiting and controlling political power (Membaca ulang pada bagian 4).</i>
22:31-22:45	<i>Even though, this is a matter of domestic politics, the realm of international relation is also important to liberals because the activities of state abroad.</i>
22:46-23:00	<i>Can gave a strong influence on freedoms at home. Okay ini benar juga. Liberal were deeply disturbed by a militaristic foreign policy ya, okay sudah (Membaca kembali pada bagian 5 dan 6).</i>
23:01-23:15	<i>Kemudian, the main concern is that war requires states to build up military power. Okay. In fact, padahal ya... this military power has 2 (two) sides, it is used not only to fight foreign countries, but also can be used to oppress its own citizens.</i>
23:16-23:30	<i>Okee... ini juga, dengan adanya alasan ini, for this reason, political systems rooted in liberalism often limit military power in ways of ensuring civilian control over the military.</i>
23:46-23:55	<i>And postediting is done, thank you very much.</i>

The transcription data showed that the researcher classified MGP as the translator who did thirty-nine rereading strategies during post-editing. The strategies were done by checking whether the translated text from Google Translate is appropriate in Indonesia (see Table 17). For example, one rereading strategy in minute 01:30-01:45: *Eh... hidup life... live eh... eh.... Seseorang untuk hidup.*

Cognitive Strategies

This part shows cognitive strategies used during post-editing Indonesia-English Google Translate outputs by concerning on (1) reasoning, (2) elaborating ideas, (3) contrasting, (4) summarizing, (5) self-questioning, (6) identifying key ideas, (7) expressing opinions, (8) reaffirming, (9) connecting ideas, (10) selecting ideas, (11) rewriting, and (12) looking for information, as shown in Chart 4:

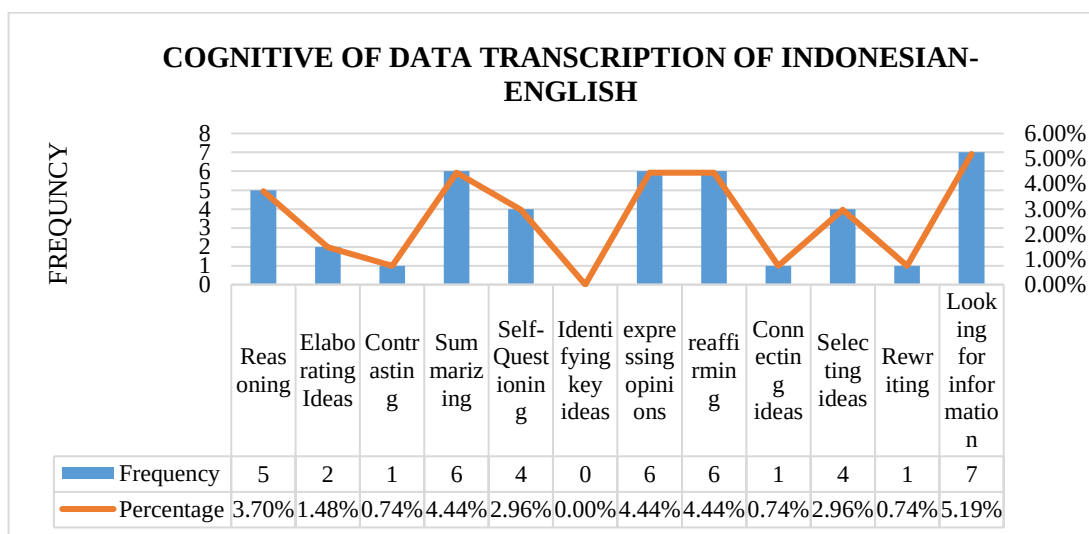


Chart 4 Cognitive of Data Transcription of Indonesia-English

A majority of cognitive strategies done by MPG during post-editing were expressing opinions and looking for information, while the following were reaffirming. The rest strategies were reasoning, selecting ideas, self-questioning, elaborating ideas, summarizing, contrasting, connecting ideas, and rewriting. Identifying key ideas did not find during post-editing (see Chart 4).

Reasoning

This part shows transcription data of reasoning strategies done by MGP during post-editing, as follows:

Table 18 Reasoning Strategies of Indonesia-English Google Translate Output

Time Stamps	Transcription
15:46-16:00	<i>Sementara ini perhatian utama nya bukan pada gender, harusnya, oke harusnya the main concern is that war requires states to build up military power.</i>
18:31-18:45	<i>Karena ya "it can also", "it is not only" aja... Not only. In fact, this military power has 2 (two) sides.</i>
20:01-20:15	<i>Tapi dalam bahasa Inggris kan enggak cocok ya, karena alasan ini, for this reason ya, sistem politik yang berakar pada liberalisme, political system rooted in liberalism often limit military power.</i>

The transcription data showed that the researcher classified MGP as the translator who did three reasoning strategies during post-editing. This strategy was done by giving a reason to consider post-editing for words or sentences that seemed inappropriate to translate into English (see Table 18). For example, one strategy in minute 18:30-18:45: *Karena ya "it can also," "it is not only" aja... Not only. In fact, this military power has 2 (two) sides.*

Elaborating Ideas

This part shows transcription data of elaborating ideas strategies done by MGP during post-editing, as follows:

Table 19 Elaborating Ideas Strategies of Indonesia-English Google Translate Output

Time Stamps	Transcription
05:01-05:15	<i>Atau tambahkan "which" is the highest aim of government. Oh ya of the government ya, em... disini ada saran sih, liberty and property...</i>
13:01-13:15	<i>At home, at home country... at home country (sambil mengetik at home country pada teks bagian 5).</i>

The transcription data showed that the researcher classified MGP as the translator who did five rereading strategies during post-editing. The strategy was done by rereading the translated text from Google Translate. Several words and sentences need elaboration, so meanings from the source text could be reached in English (see Table 19). For example, one strategy in minute 05:00-05:15: *Atau tambahkan "which" is the highest aim of government. Oh ya of the government ya, em... disini ada saran sih, liberty and property.*

Contrasting

This part shows transcription data of contrasting ideas strategies done by MGP during post-editing, as follows:

Table 20 Contrasting Strategies of Indonesia-English Google Translate Output

Time Stamps	Transcription
01:46-02:00	<i>Okay, seseorang untuk hidup eh disini bukan to life ya tapi tu live ya. Live..., that ensures, oh disini ensuring ya, suggestion.</i>

The transcription data showed that the researcher classified MGP as the translator who did only one contrasting strategy during post-editing. This strategy was done by comparing the translated text by Google Translate and the edited text by MPG whether the translated text is appropriate in English (see Table 20).

Summarizing

This part shows transcription data of contrasting ideas strategies done by MGP during post-editing, as follows:

Table 21 Summarizing Strategies of Indonesia-English Google Translate Output

Time Stamps	Transcription
14:16-14:30	<i>Okay, saya rasa juga tidak ada masalah disini, Even though this is a matter domestic politics, the realm of International relations is also important to liberals because the activities of states abroad.</i>
21:46-22:00	<i>Okay ya... Liberalism is based on the moral argument that ensuring one's individual rights to live, liberty and property is the highest aim of the government.</i>
09:01-09:15	<i>Eh... sepertinya ini sudah oke dan tidak perlu di edit, saya lanjut ke ba... kalimat ke-4, karena itu.</i>
11:01-11:15	<i>Ya, oke sudah bisa di pahami sepertinya, saya lanjut ke baris ke-5. Meskipun ini adalah em...masalah politik dalam negeri.</i>
16:16-16:30	<i>The main concern is that em.... War... requires state to build up military power... okay</i>

The transcription data showed that the researcher classified MGP as the translator who did five summarizing strategies during post-editing. This strategy was done by summarizing the results of post-editing done in English (see Table 21). For example, one strategy in minute 09:00-09:15: *Eh... sepertinya ini sudah oke dan tidak perlu di edit, saya lanjut ke ba... kalimat ke-4, karena itu.*

Self-questioning

This part shows transcription data of self-questioning strategies done by MGP during post-editing, as follows:

Table 22 Self-Questioning Strategies of Indonesia-English Google Translate Output

Time Stamps	Transcription
02:16-02:30	<i>Tapi kok enggak nyambung rasanya ya, coba saya lihat lagi. liberalism is based on the moral argument that ensuring one's individual rights to live.</i>
10:01-10:15	<i>Is to build, build itu membangun institusi, tapi build itu cocok enggak ya.</i>
13:16-13:30	<i>Em... saya cek dulu ya, "realm" itu cocok enggak ya, realm itu artinya apa ya.</i>
20:16-20:30	<i>Mana sih kekuasaan militer, dengan cara eh... in ways such as... seperti memastikan kontrol, such as ensuring civilian control, atas militer.</i>

The transcription data showed that the researcher classified MGP as the translator who did four self-questioning strategies during post-editing. The strategies were done by questioning whether the word choice in the translated text is appropriate or not in the English language (see Table 22). For example, one self-questioning in minute 02:15-02:30: *Tapi kok enggak nyambung rasanya ya, coba saya lihat lagi. liberalism is based on the moral argument that ensuring one's individual rights to live.*

Expressing Opinions

This part shows transcription data of expressing opinions strategies done by MGP during post-editing, as follows:

Table 23 Expressing Opinions Strategies of Indonesia-English Google Translate Output

Time Stamps	Transcription
03:46-04:00	<i>Rights to life, liberty and property is the highest aim of government, emm... coba ini.</i>
04:01-04:15	<i>Kaya nya ini bukan didasarkan ya, ini kayanya, liberalism is moral argument that ensuring one's individual rights to life, liberty and property is the highest aim of government, okay.</i>
04:16-04:30	<i>Ini kayanya masih enggak nyaman yah, liberalisme didasarkan pada argument moral bahwa eh... is based, eh is based on the moral argument.</i>
05:31-05:45	<i>Kebebasan dan properti adalah tujuan tertinggi, ya... to live ya, kembali, eh ujung-ujungnya kembali juga nih, to live, liberty is The highest.</i>
10:46-11:00	<i>Menurut saya enggak ada masalah ya, cocok ni udah bagus. The main concern of liberalism is to build instutions that protect individual by limiting and controlling political power. Kan limiting dengan controlling harus paralel.</i>
15:01-15:15	<i>Menurut saya juga ini tidak ada yang perlu di edit ya, karena sudah, sepertinya sudah oke ya, kaum liberal deeply disturbed by a militaristic.</i>

The transcription data showed that the researcher classified MGP as the translator who did six expressing opinions strategies during post-editing. The strategies were done by giving several opinions on changing inappropriate words from the translated text in English (see Table 23). For example, one expressing opinions strategy in minute 04:00-04:15: *Kaya nya ini bukan didasarkan ya, ini kayanya, liberalism is moral argument that ensuring one's individual rights to life, liberty and property is the highest aim of government, okay.*

Reaffirming

This part shows transcription data of reaffirming strategies done by MGP during post-editing, as follows:

Table 24 Reaffirming Strategies of Indonesia-English Google Translate Output

Time Stamps	Transcription
04:46-05:00	<i>Emm... oke, coba kembali lagi deh, liberalism is based on the moral argument that ensuring one's individual, ensuring one's individual rights to life, liberty and property eh....</i>

The transcription data showed that the researcher classified MGP as the translator who used five reaffirming strategies during post-editing. The strategies involved reaffirming words or sentences of the translated text in the English language (see Table 24).

Connecting Ideas

This part shows transcription data of connecting ideas strategies done by MGP during post-editing, as follows:

Table 25 Connecting Ideas Strategies of Indonesia-English Google Translate Output

Time Stamps	Transcription
05:16-05:30	<i>Oh pakai "is" ya... tapi disini sudah ada "is" juga, is based on the moral argument that ensuring one's individual rights to life, untuk hidup.</i>

The transcription data showed that the researcher classified MGP as the translator who did three connecting ideas strategies during post-editing. The strategies are done by adding one idea in the translated text with other ideas, so a suitable meaning can be reached in English translation (see Table 25).

Selecting Ideas

This part shows transcription data of selecting ideas strategies done by MGP during post-editing, as follows:

Table 26 Selecting Ideas Strategies of Indonesia-English Google Translate Output

Time Stamps	Transcription
01:16-01:30	<i>Ensuring ya, that, ini bukan ensuring tapi that ensures... that ensures karena mengacu pada liberalisme, that ensures one's individual rights to life.</i>
08:31-08:45	<i>Oh tidak terkendali ya, unrestrained artinya tidak terkendali. Oke, political system karena sebagai unrestrained powers, seperti.</i>
12:31-12:45	<i>Dengan "even though" ya. Even though this is a matter of domestic politics eh.</i>
18:01-18:15	<i>Also be used to... fight foreign countries but eh.... ada but ya... to fight ya.</i>

The transcription data showed that the researcher classified MGP as the translator who selected ideas during post-editing. The strategies were done by looking for one word's meaning in the English or Indonesian language, then selecting one appropriate meaning from several choices (see Table 26). For example, one selecting ideas strategy in minute 01:16-01:30: *Ensuring ya, that, ini bukan ensuring tapi that ensures... that ensures karena mengacu pada liberalisme, that ensures one's individual rights to life.*

Rewriting

This part shows transcription data of rewriting strategies done by MGP during post-editing, as follows:

Table 27 Rewriting Strategies of Indonesia-English Google Translate Output

Time Stamps	Transcription
01:01-01:15	<i>Eh.... Saya copy dulu, liberalism is based on the moral argument that... Disini ada kata....</i>

The transcription data showed that the researcher classified MGP as the translator who did only one rewriting strategy during post-editing. The strategies were done by rewriting translated words or sentences into a table to conduct a post-editing (see Table 27).

Looking for Information

This part shows transcription data of looking for information strategies done by MGP during post-editing, as follows:

Table 28 Looking for Information Strategies of Indonesia-English Google Translate Output

Time Stamps	Transcription
08:16-08:30	<i>Emmm... ini apa ya (Mengecek arti "Unrestrained" di google translate) em... bebas, unrestrained ya, tetap terkendali.</i>
10:16-10:30	<i>Build itu kan biasanya untuk bangunan ya, build, to form by ordering and uniting materials by gradual means into... (Sambil membaca definisi dari kata "build" pada website wiliam webster). To cause to be constructed, to develop according to be a... Oh bisa.</i>
11:46-12:00	<i>Ya...adalah masalah politik dalam negeri, the realm of International relationship em... apa ya.</i>
13:31-13:45	<i>Dunia ya, dunia...(sambil searching arti dari kata Realm pada google translate). Ranah, real itu ranah. Disini artinya apa.</i>
13:46-14:00	<i>"Realm" (sambil searching arti/definisi kata Realm pada website Merriam-Webster).</i>

	<i>Realm, realm okay... a primary marine or terrestrial biogeographic division of the earth's surface.</i>
17:31-17:45	<i>But it can also be used to oppress its own citizen, oppress... oppress itu... betul nggak penempatannya ya, oppress itu artinya apa, oppress...(Sambil searching definisi "Oppress" pada website Merriam-Webster).</i>
17:46-18:00	<i>Artinya mana... to crush or burden by abuse of power or authority, ya menekan ya... abuse ya, menekan.</i>

The transcription data showed that the researcher classified MGP as the translator who did ten looking for information strategies during post-editing. The strategies were done by looking for information from another source (e.g., Merriam-Webster Dictionary, KBBI, etc.) to match appropriate words or sentences in the English language (see Table 28). For example, one looking for information strategy in minute 08:16-08:30: *Emmm... ini apa ya (Checking meaning of "Unrestrained" in google translate) em... free, unrestrained, still controlled).*

Discussion

The findings of this research have contributed to metacognitive and cognitive strategies during a post-editing task for both English-Indonesian and Indonesian-English google translate outputs. The researcher has analyzed two translated texts by the following discussion, as follows:

English-Indonesia Google Translate Outputs

In this part, it can be discussed that the researcher, namely do metacognitive strategies: Identifying and Correcting Errors (3 data), Revising (9 data), Rereading (37 data), while in cognitive strategies, such as: elaborating ideas (4 data), contrasting (1 data), summarizing (4 data), self-questioning (5 data), identifying key ideas (3 data), expressing opinions (11 data), reaffirming (5 data), connecting ideas (3 data), selecting ideas (7 data), rewriting (3 data) and looking for information (10 data). Reasoning strategies were not found in this part.

It is in line with (Hilma, 2011) that Google Translate helps translate a word basically, but re-check translations' results is needed. In addition, (Fayruza et al., 2020) reported in a comparison study about translation quality by Google Translate and Microsoft Translator reveals that Google Translate is better than Microsoft translator in translating. However, both machines always produce an unreadable, inaccurate, and unacceptable translation. In contrast, this research does not analyze translators based on gender, as conducted by (Hashempour et al., 2015). The similarity of the research with this current research is the metacognitive awareness of the translators.

In the researcher's point of view, English-Indonesia Google Translate outputs have been produced by following several steps, including metacognitive and cognitive strategies used. From those strategies, results of the translated text can be reached, and readers of the text can comprehend the meaning without denying the original meanings of the source text.

Indonesia-English Google Translate Outputs

In this part, it can be discussed that the researcher, namely do metacognitive strategies: Identifying and Correcting Errors (3 data), Revising (7 data), Rereading (36 data), while in cognitive strategies, such as: elaborating ideas (2 data), contrasting (1 data), summarizing (6 data), self-questioning (4 data), expressing opinions (6 data), reaffirming (6 data), connecting ideas (1 data), selecting ideas (4 data), rewriting (1 data) and looking for information (7 data). Identifying key ideas strategies were not found in this part.

It is in line with (Noviarini, 2021) that analyzed Indonesia-English translation using Google Translate, where Google Translate is helpful for a translator. However, the results cannot adapt contexts and situations from the source text. In addition, (Azer & Aghayi, 2015) evaluated machine-translation output concluded that google translate had obtained higher quality in translation than other software. This current research contrasts with (Hashempour et al., 2015) that discusses gender and education level in translation.

From the researcher's point of view, Indonesian-English outputs are produced by following several steps, including metacognitive and cognitive strategies. However, several strategies were not found during post-editing. At least, the post-editing process done by the translator can run as expected before the text is read.

Comparing the two translations done, it can be seen that the translator in post-editing processes dominantly uses cognitive processes. The cognitive processes are needed to ensure that translation results show a good understanding of source language to target language without diminishing a real meaning of the text. It is supported by Siregar (2021), one of the metacognition steps is evaluation, which relates to conducting a reflection on how well a translator meets their goals after doing a translation.

CONCLUSION

Based on the findings and discussion, several points can be encapsulated to answer the two research questions proposed. First, metacognitive strategies used by the translator for English-Indonesian Google Translate outputs during post-editing were identifying and

correcting errors, revising, and rereading. Then, the translator used in cognitive strategies, i.e., elaborating ideas, contrasting, summarizing, self-questioning, identifying key ideas, expressing opinions, reaffirming, connecting ideas, selecting ideas, rewriting, and looking for information. Reasoning strategies were identified as not to be used during post-editing. Second, metacognitive strategies done by the translator for Indonesia-English Google Translate outputs during post-editing are similar to the translator done in Indonesian-English post-editing (i.e., identifying and correcting errors, revising, and rereading). Then, the translator used in cognitive strategies, i.e., elaborating ideas, contrasting, summarizing, self-questioning, expressing opinions, reaffirming, connecting ideas, selecting ideas, rewriting and looking for information. Identifying key ideas strategies were not identified to be used during the post-editing. The results of this study also contribute to the body of knowledge in translation process using translation machine, indicating that metacognitive and cognitive strategies also play a role by a translator during the translation process in order to produce a good translation. This research shows that not only post-editing is done during the translation of a text but also the involvement of metacognitive and cognitive processes during post-editing. This can help a translator consider whether the translated text is readable, acceptable, and understandable by a reader of the text in the future. In addition, the strategies help translators choose the best words for translations.

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