

Identifying the cognitive and metacognitive approaches using post editing techniques toward English-Indonesian and Indonesian-English Text

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Abstract

The aims to identify toward English-Indonesian and Indonesian-English Text by using cognitive approach and to identify toward English-Indonesian and Indonesian-English Text by using metacognitive approach. Related to cognitive approaches and metacognitive approaches; The person engages in a lot of metacognitive processes. The respondent modified the submit-text using their own methods for the total results. In order to construct a comparative target text, the respondent first retranslated using Google Translator to create the target texts. Second, compared the two translated versions of the text that Google Document (GD) and Google Translate created (GT). The participant appears to be able to rely on her logical reasoning and solely has faith in the resources that have been made available to her. TAP translation techniques work to help students develop a positive attitude about translation as an activity that incorporates a great deal of cognitive and metacognitive activities. The research utilized a qualitative approach with a case study method where the participants is asked to conduct a post editing activity utilizing the Think Aloud Protocol or TAP strategy. The strategies use for collecting the data are: (1) examining, (2) analyzing, (3) categorizing and (4) assessing. Coding analysis is used to analyze the data. Therefore, the goal of the post-editing is basically to identify a gap or a problem in the MT output and find a solution to the problem to achieve the acceptable final output.

Keywords: Cognitive, Metacognitive, Think Aloud Protocol (TAP), English-Indonesian, Indonesian-English



A. INTRODUCTION

Translation is an endeavor of finding identical meaning from a script into the second language. Basically, the process of translation is translating a text from the source text and the target language meaning must be identical with data source. (Hatim & Munday, 2004) explained translation focused on the role in taking the original or taking the Source Text (ST) and creating the Target Text in a different language (TT). That's the reason that the involvement of complex decision making and problem solving will take time for a translator to arrive at an appropriate and understandable target text while doing the process of translation. There are lots of translator utilize the machine translation such as Computer Assisted Translation also known as CAT or Machine Translation (MT) such as Google Translation (GT) output

as their environment system that assists them to create a readable text which adheres to the conformity and relevance to the targeted text. Machine translation (MT) services available nowadays because they are cheap and easy to use, and therefore can provide a fast draft translation that only needs some editing. Recently, the translation process mainly focuses on the cognitive or mental process of the translator/interpreter who is involved in the translation act. Those issues and interest in empirical research closer to the translation technique have advanced remarkably, derived from and influenced by means of the interest, or ideas that what, as a be counted of fact, on the earth is on translators' thoughts while they may be accomplishing a technique of translation (Zaretskaya,2015).

To retrieve concise and reliable information on translation cognition techniques, technological tools, in particular keylogging software and eye-tacking, were used (Jakobsen & Schou, 1999; O'brien, 2006). The majority of the best translation models divide the translation process into three levels: source-text input (ST), target-text output (TT), and interaction between ST input and TT output (Hatim & Mason, 1997; Jakobsen & Schou, 1999). Using metacognitive techniques can also enable them to make a connection between their linguistic proficiency in the source and target languages and the unique requirements of the translation methodology. The purpose of metacognitive consciousness, taking into account one's thoughts, or the ability of a person to pay attention to their own internal strategies (Vandergrift et al., 2006). Metacognitive writing strategies can improve authors' output and boost their pleasure. Among all teaching activities, the metacognitive process, which requires careful planning, documenting, and assessing, is a higher-order governance skill. (Goh, 2008, quoted Flavell) Assumed metacognitive reviews are any conscious cognitive or emotive narratives that are related to and accompany any academic agency.

The report urges arranging an assessment towards detecting the metacognitive and cognitive operations together with post-modification activities for either English-Indonesian or Indonesian-English from Google Translate, per the sources mentioned above. The study has the following goals:

- a. Recognizing cognitive processes when engaging in English-Indonesian and Indonesian-English post-modification activities Web Translator.
- b. Inquiring metacognitive processes while undertaking post redacting procedures toward English-Indonesian and Indonesian-English Google Translate.

B. METHOD

Research Design

The research utilized a qualitative approach with a case study method where the participants is asked to conduct a post editing activity utilizing the Think Aloud

Protocol or TAP strategy. In this form of study, the writer gathered, categorized, examined, and draw end primarily based on evaluation without creating a generalization. According to Creswell (2014) stated that qualitative is one type of research method that investigates and grasps individual or groups intentions in social or human problems. This definition gives the view that qualitative research is used to recognize and interpret the which means of the participants. more particularly, qualitative research may be described as an investigative inquiry procedure primarily according to wonderful technical customs of probe explores community or people issues. Qualitative research offers with information series of phenomena triumphing within the most important item of studies in order that the studies is characterized as problem-oriented studies

Participants

The participant in this research only one participant. Her name is Dini and she is an English lecturer in one of universities in Jakarta.

Data Source

Data origins for qualitative study may come up from many resources, like printed paper, questions-answers, inspection, in fact audio-visual transcriptions (Creswell, 2012). Data in the research is: (1) The audible machine translations of the think-aloud practices completing two post-modify activities employing Machine Translation into translate between English to Indonesian and Indonesian to English. (2) The contents of the spoken tapes that were recorded utilizing TAP procedures. The writings discuss concerns with constructivism from both an English and an Indonesian perspective. Zoom has taken up the task of audio-visual recording.

Data Collection

(Muhammad & Kabir, 2016) mentioned Collection of Data is the procedure of collecting and measuring data on variables of interest, in an mounted systematic style that permits one to reply stated studies questions, take a look at hypotheses, and examine consequences. (Arikunto, 2002) defined there are four strategies in gathering information, particularly (1) examining, (2) analyzing, (3) categorizing and (4) assessing. In this case, keep track and papers strategies are used. The transcript approach is utilized because the audio-visual transcription of the TAP procedures for the duration of two submit-modifying duties both English to Indonesian and Indonesian to English translations by the Google Translate.

- 1) Examination/Observation. After watching the recording, to decide whether or not there had been sufficient information for the observe, initial statement changed into applied. The commentary is going to reveal specific sentences concerned metacognitive and cognitive approaches.
- 2) Analyzing

The author analyzed the cognitive strategies and the metacognitive strategies

3) Categorizing

On this list categorizing the cognitive strategies there are producing thoughts, improving, expanding rationalization, regression, summarizing, also metacognitive strategies are making plans, tracking, comparing and grasping

4) Assessing

Every sentence has been identified is classified to peer whether cognitive and metacognitive approaches are precise for category

Technique of Analyzing Data

Making use of the ciphers in every list, the audio-visual turned into noted and ciphered the writer regarded more the cipher documents. Similarly, a respondent interrogating turned into carried out at the cipher written versions to make certain that the programming technique turned into executed efficaciously, and there have been no mistakes in interpreting respondent statements toward the program.

Data Subtraction

A method known as data subtraction is used to identify, categorize, and concentrate linked information and events. In this instance, our attention was on how frequently shifts were based only on this criterion. The author then examined cognitive and metacognitive techniques. As a result, the author downplayed information that seemed irrelevant to the study.

Data Display

Depicts the dimensions of the facts. Researchers presented data that was entirely dependent on record instructions. confirmation. Making decisions and confirming the results of the examination carried out on the chosen records is the final phase

C. RESULTS AND DISCUSSION

Finding

Tabel 1. Cognitive and metacognitive during post-editing tasks for an English to Indonesian

Behaviours	Components	Fragments
(Congjun :2005)	Generating Ideas	<i>(ok berarti disini) konstruktiviseme memandang (kali ya lebih bagus memandang karena ini teks nya baku ya jadi..) memandang dunia apa yang dapat kita ketahui tentang dunia, sebagai kosntruksi social</i>

Cognitive		
	Revising	<i>(kaum kali ya mba apa kelompok aku pake kelompok deh klo ga gini deh) para konstruktivist melampaui realitas material dengan memasukkan pengaruh gagasan dan keyakinan pada politik dunia.</i>
	Elaborating	<i>(baca ST) Contoh tersebut juga menunjukkan bahwa senjata nuklir itu sendiri tidak berarti apapun (baca ST) kecuali kita memahami konteks sosialnya (klo menurut aku gini ya mba)</i>
	Clarification	<i>(baca ST) Penting untuk dipahami atau dimengerti ya dipahami aja deh bahwa hubungan social antara USA dan Inggris (dan juga deh) dan (Korea eh) Korea Utara dilihat dengan cara yang sama oleh negara-negara tersebut, sebagai pemahaman bersama (dalam kurung ya) atau instersubjektif eh sorry) (atau intersubjektivitas) membentuk dasar interaksi mereka.</i>
	Retrieval	<i>Dengan kata lain, makna tersebut tidak (not fixed itu berarti) tidak pasti namun dapat berubah dari waktu ke waktu (baca ST) tergantung pada ide-ide dan (belief kan kepercayaan mungkin) keyakinan yang dipegang oleh pelaku</i>
	Rehearsing	<i>menggambarkan konstruksi social (of reality berarti) konstruksi social realistas Ketika dia menjelaskan bahwa 500 senjata nuklir inggris tidak begitu mengancam dibandingkan 5 senjata nuklir korea.</i>
	Summarising	<i>(ok berarti) pandangan ini mungkin merujuk pada hakikat realitas dan hakikat pengetahuan yang di ee.... yang disebut ontology dan epistemology dalam bahasa penelitian (klo aku begini mba jdnya)</i>
<i>Wenden (1991)</i>	Planning	<i>(Ok mba amal aku mulai. Ini aku mulai dari EN-ID dulu ya , ok berarti disini) konstruktiviseme memandang dunia apa yang dapat dapat kita ketahui tentang dunia, sebagai kosntruksi social</i>
Metacognitive		

Monitoring	<i>(Ok mba aku cek dlu ya , ini tuh teksnya lumayan baku berarti jd memang kita menerjemahkannya juga harus baku juga kata-katanya)</i>
Evaluating	<i>ok aku rasa cukup betul ko mba ini</i>

Tabel 2. Cognitive and metacognitive during post-editing tasks for an Indonesian to English

Behaviours	Components	Fragments
(Congjun :2005) Cognitive	Generating Ideas	<i>(baca ST) oh ini berarti yang dimaksud negara-negara ya. Coba dulu sedikit-sedikit ya mba... berarti Identifying their ee.. (dalam kurung) (countries) identity ya.. terus is important for constructivists because eee... because sebentar aku ganti aja deh they can proponents argue that identity will determine the interest and action to be taken by countries.</i>
	Revising	<i>(baca ST) the small country is ee..... is arguably more focused on its survival and then daripada (ok aku pake ini aja deh) whereas big country focuses on dominating global political , economy, and military affair</i>
	Elaborating	<i>(baca ST) a country therefore can't act ya.... contrary ya.... to the identity because that would (baca ST) question regarding validity of identity including their preferences ok.</i>
	Clarification	<i>(baca ST) ok this case might be explained why Germany (baca ST) oh gtu berarti despite being major power with a leading global economy did not become a military power in the second half of the twentieth century (agak kompleks ya ini ya kalimatnya)</i>
	Retrieval	<i>(baca ST) identity is representation of actors' gini ya kepunyaan understanding about who they are which turn signals their interest ok</i>

	Rehearsing	<i>(baca ST) Berarti another central issue from ee.. from constructivism are identity and an interest. Ok</i>
	Summarising	<i>(baca ST) following the kekejaman berarti atrocity of the Nazi regime of Adolf Hitler. during the world war , Germany's political identity shifted from one of militarism state to pacifism due to its unique historical situation</i>
Metacognitive <i>Wenden (1991)</i>	Planning	<i>ok mba amal aku lanjutin ya tadi kan EN- ID skrg ID-EN</i>
	Monitoring	<i>(Coba aku cek dulu ya dari atas mba , ini ada yang typo juga .. agak sulit sedikit ya mba agak rumit tapi bisa kok)</i>
	Evaluating	<i>(Kayanya ini deh mba a deh sip thank you mba amal)</i>

Discussion

Numerous discoveries regarding cognitive strategies have been made. The first supports earlier findings in that highly capable people no longer require clarifying cognition for extremely complicated tasks. a challenger. This shows that those with excessive talent tend to be more cautious when presented with difficult duties and to utilize a well considered approach. For the same reasons as when they employ clarifying cognition, they only use reflection and connection for tasks that require a high level of complexity. When it came to cognition, the high-capabilities player hired clarifying for the high-complexity project but not for the low-complexity task. This didn't occur in the low complexity challenge usually due to the fact the students could make use of the approaches found out in magnificence and had already located the critical information required to finish the project. Refers to the theoretical framework related to cognitive approaches and metacognitive approaches; The person engages in a lot of metacognitive processes. The respondent modified the submit-text using their own methods for the total results. In order to construct a comparative target text, the respondent first retranslated the supply material using Google Translator to create the target texts. Second, the respondent compared the two translated versions of the text that Google Document (GD) and Google Translate created (GT). When encountering a new term or word, the participant used online dictionaries such word lists. To get the right English grammar, it was necessary to repeat a few instances and make a few word or term changes. It is really surprising because in addition to having a higher skill level, they also had a vast network and cutting-edge resources that they

could employ to assist with post-editing in the area of a regular website or online dictionary. The participant gave off the impression that she was able to rely only on her logical reasoning and the resources that were made available to the respondent. The textual material that respondents choose to control has an extra impact on the metacognitive processes. According to Siregar (2021) who explained metacognition, we can successfully complete a task by planning, monitoring, comparing, and understanding. This shows that while cognitive processes enable people to function normally, metacognition takes it a step further by increasing a person's awareness of their cognitive techniques. Every participant's verbal acts and the related behaviors have been categorized using a method known as metacognitive strategies. Participants' handling of the text also affects the metacognitive activities. According to Eftekhary (2012), metacognitive techniques were used to classify each participant's verbal acts and the actions that went along with them. Eftekhary's (2012) recommended tactics included asking questions, preparing documentation, and proposing the agenda because an acceptable strategy was not available. It is hoped that the strategies used regularly by the participants will change the cognitive processes that led to the following assertions.

PEDAGOGICAL IMPLICATION

Given the requirement for TAP translation techniques. The development of skills that often tend to increase and boost essential translation abilities needs to be emphasized by translator educators. Additionally, it is advised that translation instructors work to help students develop a positive attitude about translation as an activity that incorporates a great deal of cognitive and metacognitive activities. such that the students are comfortable using cognitive and metacognitive activities in other instructions in addition to translation sessions. and increase their self-assurance in their skills and abilities.

It is also advised while teaching translation to emphasize the notion that translation is a result of many different cognitive and metacognitive processes in college students. Hence, pair activities or organization work must be the main focus. as better accomplished in English collaborative and cooperative learning settings, as stated by Rothe-Neves (2007)..

D. CONCLUSION

Respondents in the translation process had to do cognitive and metacognitive tasks in order for the study to be completed. As a result of the participants' strong English language skills, the study's participants relied less on online translation tools and more on their cognitive ability to translate documents. According to the results of this study, individuals with high abilities can try to comprehend how to overcome their difficulties with projects of varying degrees of difficulty while reading the text. A great performer completes planning, monitoring, and assessment. Since sharing of

content that improves performance in sports is not prohibited by the assume-aloud policy, metacognitive approaches can be applied successfully.

REFERENCES

- Arikunto, Suharsimi. (2002). *Prosedur Penelitian : Suatu Pendekatan Praktek*. Jakarta : PT. Rineka Cipta.
- Bergen, David. (2007). THE ROLE OF METACOGNITION AND COGNITIVE CONFLICT IN THE DEVELOPMENT OF TRANSLATION COMPETENCE. *Across Languages and Cultures* 10 (2), pp. 231–250. 10.1556/Acr.10.2009.2.4
- Congjun, Mu. (2005). A Taxonomy of ESL Writing Strategies. <https://eprints.qut.edu.au/secure/00000064/01/congjun->
- Creswell, J.W. 2012. *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*, 4th ed. Boston: Pearson
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approached*. Thousand Oaks: SAGE Publications.
- Dancette, J. (1997). Mapping meaning and comprehension processes in translation. *Cognitive Processes in Translation and Interpreting*
- Eftekhary, Ali & Aminizadeh, Shayesteh. (2012). Investigating the Use of Thinking Aloud Protocols in Translation of Literary Texts. *Theory and Practice in Language Studies*, 2. DOI: 10.4304/tpls.2.5.1039-1047.
- Flower and Hayes (1981) = Flower, L., & Hayes, J. R. (1981). A cognitive process theory of writing. *College Composition and Communication*, 32, 365-387
- Goctu, R. (2017). Metacognitive Strategies in Academic Writing. In *Journal of Education in Black Sea Region* (Vol. 2).
- Goh, C. (2008). Metacognitive instruction for second language listening development: Theory, practice and research implications. In *RELC Journal* (Vol. 39, Issue 2, pp. 188–213). <https://doi.org/10.1177/0033688208092184>
- Hatim, B., & Mason, I. (1997). *The translator as communicator*. Routledge
- Hatzidaki, A., & Pothos, E. M. (2008). Bilingual language representation and cognitive processes in translation. *Applied Psycholinguistics*, 29(1), 125–150. <https://doi.org/10.1017/S0142716408080065>
- Jakobsen, A., & Schou, L. (1999). Translog documentation: Version 1.0. In G. Hansen (Ed.), *Probing the process in translation: Methods and results* (pp. 151–186). Copenhagen: Samfundslitteratur.
- Kennedy, M. L. (Ed.). (1998). *Theorizing Composition: A Critical Sourcebook of Theory and Scholarship in Contemporary Composition Studies*. Westport, USA: Greenwood press
- Krings, H. P. (2001) *Repairing texts: empirical investigations of machine translation post-editing processes*, Kent: Kent State University Press.
- . Muhammad, S., & Kabir, S. (2016). METHODS OF DATA COLLECTION Article View project. <https://www.researchgate.net/publication/325846997>

- Nida, E. A., & Taber, C. R. (1969). *The theory and practice of translation*. Leiden: Brill, E. J.
- O'Brien, S. (2006). Pauses as indicators of cognitive effort in post-editing machine translation output. *Across Languages and Cultures*, 7(1), 1–21. <https://doi.org/10.1556/acr.7.2006.1.1>
- Parodi, G. (2003). *Relaciones entre lectura y escritura: una perspectiva cognitiva-discursiva [Relations between reading and writing: A cognitive-discursive perspective]*. Valparaíso, CL: EUVSA
- Rothe-Neves, Rui. (2007). Notes on The Concept of Translator Competence, 14, 125-138. Brasil: Belo Horizonte
- Scardamalia's model (1987)= Bereiter, C., & Scardamalia, M. (1987). *The psychology of written composition*. Hillsdale, NJ: L. Erlbaum.
- Schmidt, R. (2001). Attention. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 3-32). Cambridge, UK: Cambridge University Press. <http://doi.org/10.1017/CBO9781139524780.003>
- Siregar, B. U. (2021). *Metacognition [PowerPoint slides]*.
- Vandergrift, L., Goh, C. C. M., Mareschal, C., & Tafaghodtari, M. H. (2006). The metacognitive awareness listening questionnaire (MALQ): Development and validation. *Language Learning*, 56(3), 431–462. <https://doi.org/10.1111/j.1467-9922.2006.00373.x>
- Wenden, A. (1991). Metacognitive strategies in L2 Writing: A case for task knowledge. J. E. Alatis (Ed.), *Georgetown University Round Table on Languages and Linguistics*, p. 302-321. any publishing house and place?
- Wiles, W. (1997). *Metacognitive strategy programming for adult upgrading students (Unpublished doctoral dissertation)*. University of Alberta, Edmonton, Canada.
- Xing, M. Wang, J., & Spencer, K. & (2008). Metacognitive beliefs and strategies in learning Chinese. *System*, 37, 1,p. 46-56.
- Zaretskaya, A. (2015). *The Use of Machine Translation among Professional Translators*. <https://www.researchgate.net/publication/283667234>