The Impact of Collaborators on the Quality of Translation: A Study on Translating Chinese Texts into Indonesian

Jessica Irawan jessicairwn@gmail.com

Daniel Ginting daniel.ginting@machung.ac.id

Universitas Ma Chung

ABSTRACT

The study aimed to investigate the role of translation collaborators in translating Chinese texts into Indonesian and to evaluate the quality of translations from Mandarin into Indonesian. An analytic scoring rubric was utilized to assess the quality of the translations in terms of grammar, vocabulary, readability, and tone. The study found that there is no significant difference between the mean scores of texts translated by an individual translator and those translated collaboratively. The authors identified that the number of source texts, content of the translation, structure of the text, and readability of the output contribute to the similarity in quality between the two methods. However, factors such as editing and correction, time frame, and supporting tools (sources) make the translation process different between the two methods. The study also found that the duration needed for collaborative translation is relatively shorter compared to translating individually, and collaborative translation can result in faster completion times and improved accuracy and readability of translated texts. Key words: Translation; Collaboration; Individual

INTRODUCTION

Translation services have a vital role as needed in the world of business, academics, and law. Documents such as foreign literature, business documents, visas, passports, letters, agreements, and court decisions must be accurately translated by competent translators. A translator must produce a translation that can convey same meanings with the original texts when read by TL readers (Khrais, 2017). Thus, doing translation must be done accurately to ensure that the contents of the original language text can be read correctly without any misinterpretations.

Translation is the process of changing a text from the source language (SL) into another language, the target language (TL) whose aim is to ensure equivalence between the source text (ST) and the target text (ST) regarding phrases, clauses, paragraphs, and others. Nevertheless, translating texts is not always easy. In translating literary texts, for example, translators must be able to animate the text using proper personification and figurative words (Newmark, 1988). Very often translation problem arises due to the cultural differences between the source and target languages (Nababan, 2012). Each translator has different views and translation results because they have different educational background, social life, and skills (Bánhegyi, 2012). Another problem in translation is related to the inaccurate transfer of meaning (Herman, 2014) caused by sociocultural backgrounds in different SLs (Suryawinata & Hariyanto, 2016). Moreover, differences in the system of the source language and the target language also make translation work complicated due to grammatical structure shifts and changes in word classes and sentences from two different languages (Nababan, 2012).

Several researchers have carried out some initial studies on factors attributing to translation quality such as language proficiency, cultural knowledge, mastery of topics, skills in using translation tools, editing and proofreading, timeframe and supporting sources, and client feedback. All of these factors affect the accuracy and appropriateness of the resulting translation. For example, PACTE (Processability Approaches to Translation and Interpreting Studies) found that language proficiency is key to producing an accurate translation (PACTE, 2003). Language proficiency refers to the translator's ability to use source and target languages at a high level of proficiency. In this case, a translator needs to have a very good understanding of both languages' grammar, syntax, and vocabulary to ensure that the translation accurately conveys the meaning of the source text.

The importance of cultural knowledge in translation has been highlighted in studies such as those conducted by Snell-Hornby (1988) and Nida and Taber (1974), who found that the role of culture plays an important role in creating good translation. A translator with cultural knowledge can consider cultural nuances and references in the source text and ensure the translation is accurate and culturally appropriate for the target audience.

Mastery of translation material is a factor that supports the quality of translation results. A study by Deppermann et al. (2018) says that material from translated documents is very important to ensure that the translation produced is appropriate and under the original intent. Mastery of the material refers to the translator's knowledge and understanding of the topic of the source text. In cases where the source text is technical or specialized, a translator with mastery of the topic can ensure that technical terms and concepts are accurately translated into the target language.

The skills of using translation tools is also examined by Santoso (2010), who said that these tools are enough to help translators to translate text into other languages. Translation tools refer to technology that can assist translators in the translation process. These tools can help improve the consistency and accuracy of translations and make the translation process more efficient (Ginting, 2021; Ginting et.al. 2022). In translating, editing, and correcting it, O'Brien (2011) stated that asking a second translator to review and edit the translation produces a higher quality translation. The editing and proofreading factor involves reviewing and revising translations to

improve their accuracy, fluency, and consistency. Having a second translator to review and edit the translation can help catch errors and ensure the translation is high quality.

A translator requires a relatively long period and is not efficient. Risku and Windhager (2013) study found that time pressure and lack of resources can negatively impact translation quality. Time and resources refer to the time and resources available for translation. Lack of time or resources can lead to rushed or incomplete translations, which can negatively affect the quality of the final product.

The last factor is research by Olohan (2003), who found that client feedback can help translators better understand the purpose and context of the translation and produce higher-quality translations. The client feedback factor involves inputs and feedback provided by clients or ends users of the translation. Client feedback can help translators better understand the purpose and context of the translation, which can result in a higher quality final product that better meets the needs of the client or end-user.

Huss (2018) researched that translating collaboratively can produce quality translations. Collaborative translation includes the collaboration of a translator with other translators, and parties such as original writers, scriptwriters, directors, actors, and other agents, crowdsourcing collaborative translators who usually utilize technology. Goethe-Institut Korea (2018) calls this cooperative translation model the term social translating, namely translation that involves translators from various places to discuss in a digital forum and allows translators to invite the original author of the text or book being translated. Dorri and Khani (2018) and Ketola and García-Escribano (2018) conducted research, namely a collaborative translation project to translate scientific texts, which was carried out online by utilizing the social media Telegram.

Although previous studies have mentioned several factors, such as the ability of translators, competence in certain fields, and access to related sources, the researcher found that there is still a lack of research that examines and proves how the role of collaborators influences concretely and significantly the quality of translation. This study investigates the role of translation collaborators in translating Chinese texts into Indonesian.

LITERATURE REVIEW

Previous Studies

Several researchers have carried out some initial studies on translation. The quality of translation is influenced by several factors, such as language proficiency, cultural knowledge, mastery of topics, skills in using translation tools, editing and proofreading, timeframe and supporting sources, and client feedback. All of these factors affect the accuracy and appropriateness of the resulting translation. PACTE

(Processability Approaches to Translation and Interpreting Studies) found that language proficiency is key to producing an accurate translation (PACTE, 2003). Language proficiency refers to the translator's ability to use source and target languages at a high level of proficiency. A translator needs to have a very good understanding of both languages' grammar, syntax, and vocabulary to ensure that the translation accurately conveys the meaning of the source text.

The importance of cultural knowledge in translation has been highlighted in studies such as those conducted by Snell-Hornby (1988) and Nida and Taber (1974), who found that the role of culture can be considered in translation. A translator with cultural knowledge can consider cultural nuances and references in the source text and ensure the translation is accurate and culturally appropriate for the target audience.

Mastery of translation material is a factor that supports the quality of translation results. A study by Deppermann et al. (2018) says that material from translated documents is very important to ensure that the translation follows the original intent and is appropriate. Mastery of the material refers to the translator's knowledge and understanding of the topic of the source text. In cases where the source text is technical or specialized, a translator with mastery of the topic can ensure that technical terms and concepts are accurately translated into the target language.

The skills of using translation aids were also examined by Santoso (2010), who said that these tools are enough to help translators to translate text into other languages. Translation tools refer to technology that can assist translators in the translation process. These tools can help improve the consistency and accuracy of translations and make the translation process more efficient.

In translating, editing, and correcting the translated texts, O'Brien (2011) stated that asking a second translator to review and edit the translation produces a higher quality translation. The editing and proofreading factor involves reviewing and revising translations to improve their accuracy, fluency, and consistency. Having a second translator to review and edit the translation can help catch errors and ensure the translation is high quality.

A translator requires a relatively long period and is not efficient. Risku and Windhager (2013) study found that time pressure and lack of resources can negatively impact translation quality. Time and resources refer to the time and resources available for translation. Lack of time or resources can lead to rushed or incomplete translations, which can negatively affect the quality of the final product.

The last factor is research by Olohan (2003), who found that client feedback can help translators better understand the purpose and context of the translation and produce higher-quality translations. The client feedback factor involves inputs and feedback provided by clients or ends users of the translation. Client feedback can help a translator better understand the purpose and context of the translation, which can result in a higher-quality final product that better meets the client's or end user's needs.

METHOD

The purpose of this study is to evaluate the quality of translations from Mandarin into Indonesian. To achieve this aim, the research design employed is evaluative, which measures the quality of translation. The source text used in this research is a collection of Chinese stories entitled "启迪青少年体验心里的故事" (translated to "A collection of stories that inspire young people"). The source text was obtained from an application called "起点读书" which provides a collection of Chinese stories, compiled by Lin Da Wei in 2016. The app "起点读书" is a popular Chinese reading app that offers a wide range of novels, including romance, fantasy, and science fiction. It also allows users to interact with authors and other readers through comments and forums.

Before commencing the research, the researcher obtained permission from the raters, whose name was disguised to ensure privacy and maintain ethical research standards (Ginting, 2022). To ensure that the raters meet the set criteria, they must have the highest level of Mandarin proficiency. A higher level of education and work experience results in a higher level of performance (Usman, 2011; Artatana, 2013). Since they play an important role in developing translation quality, we include those criteria for the rater selection.

The scoring process, along with the sample text and rubric for assessment, was explained to the raters. Two forms of text were provided for the assessment: text 1, which was the result of individual translation, and text 2, which was the result of collaboration. However, the raters were not informed of this information. The assessment utilized an analytic scoring rubric that included assessment criteria such as grammar, vocabulary, readability, and tone. An analytical rubric is a set of performance scores that allows for the evaluation of several different criteria independently (Haladyna & Rogriguez, 2013).

After the assessment, data analysis was conducted using T-test and SPSS methods. T-test is a statistical method that compares two samples or populations regarding their averages or means. The T-test determines the relationship between independent and dependent variables, with one independent variable being fixed or controlled (Sarwono, 2006; Sugiyono; 2017).

RESULT AND DISCUSSION

Statistical validation

The writers conducted an independent samples t-test comparing the mean scores of two groups of raters, one group who assessed the quality of translation for text 1

(individual translation) and another group who assessed the quality of translation for text 2 (collaborative translation). The t-test results indicate that the p-value (Sig.) is 1.34, which is greater than the commonly used alpha level of 0.05, indicating that there is no significant difference between the mean scores of the two groups of raters. Therefore, the writers cannot reject the null hypothesis that there is no significant difference between the qualities of translated texts translated by an individual translator and collaborative translators.

The writers conclude several reasons explaining the no significant difference between the qualities of translated texts translated by an individual translator and collaborative translators. For example, the number of source texts is not too many, while the source text in Mandarin that will be translated into Indonesian is relatively easy for both individual and collaborative translators. Regarding the number of source texts not being too many, Song and Li (2017) found that individual translators tend to perform better than collaborative translators when working on a large amount of source texts. However, when the number of source texts is relatively small, there is no significant difference between the two translation methods.

Factors such as mastery of the topic, cultural knowledge, and skills in using translation aids in translating texts also contribute to the ability of an individual translator and collaborative translators to translate texts with the same quality. As for the source text being relatively easy, Al-Jarrah (2015) suggests that the difficulty of the source text plays a role in determining the effectiveness of collaborative translation. If the source text is relatively easy, then both individual and collaborative translators can perform well. On the topic mastery, Al-Khalifa (2019) argues that the translator's familiarity with the topic of the source text can lead to a better understanding and more accurate translation. This applies to both individual and collaborative translation. In terms of cultural knowledge, Liu and Lin (2019) point out that a translator's cultural background and knowledge can affect the quality of translation. This is especially important for translating idiomatic expressions or culturally specific references, and it applies to both individual and collaborative translation. As for translation aids, Wang and Li (2020) found that the use of translation memory software can improve the quality of translation, regardless of whether it is done individually or collaboratively. However, they also suggest that collaborative translation can benefit from more advanced translation aids, such as online glossaries or term bases. This study found three factors that contribute to the similarity in the quality of translations done individually and collaboratively: the content of the translation, the structure of the text, and the readability of the translation output.

The content of the translation

The first aspect is the content of the translation. The content of the translation is related to the extent to which the message in the text can be conveyed or understood by the reader. In the study, the content of the translation was conveyed well by both individual and collaborative translators, as shown in the text below.

Source texts 1:

玛莉·马特琳不仅是一个哑巴,还是一个聋子。玛莉·马特琳出生时是一个正常的孩子。但,她在出生 18 个月后,被一次高烧夺去了听力和说话的能力。

Individual translator's translation:

Marlee Matlin lahir sebagai anak normal. Namun, 18 bulan setelah dia lahir, dia kehilangan kemampuan untuk mendengar dan berbicara setelah mengalami demam tinggi.

Collaborative translators' translation:

Marlee Matlin lahir sebagai anak normal. Namun, 18 bulan setelah dia lahir, dia kehilangan kemampuan untuk mendengar dan berbicara setelah mengalami demam tinggi.

From the example sentence above, there is no difference at all between the results of individual translation and collaborative translation. This is due to the level of language proficiency and mastery of the topic between individual and collaborative translators, as well as the text being translated is not at a high level of difficulty, so the results given are not different.

The structure of the text

The structure of translated text is related to the content within it. The order of the subject, predicate, object, and adjunct found in the source language is different from the SPOK (subject-verb-object-adverb) order in the Indonesian language. To obtain a translation that is easily understood by readers, translators must rearrange the sentence structure to match the SPOK order in the Indonesian language, as shown in the example below.

Source texts 2:

一个女儿对父亲抱怨她的生活,抱怨事事都那么艰难。她不知该如何应付生活,想要自暴自弃了。她已厌倦抗争和奋斗,好像一个问题刚解决,新的问题就又出现了。

Individual translator's translation:

Seorang anak perempuan mengeluh kepada ayahnya bahwa hidupnya begitu sulit. Dia tidak tahu bagaimana menghadapi hidup dan ingin menyerah pada dirinya sendiri. Dia lelah berjuang dan berjuang, seolah-olah satu masalah baru saja diselesaikan, muncul masalah baru.

Collaborative translators' translation:

Seorang anak perempuan mengeluh kepada ayahnya bahwa hidupnya begitu sulit. Dia tidak tahu bagaimana menghadapi hidup dan ingin menyerah pada dirinya sendiri. Dia lelah berjuang dan berjuang, seolah-olah satu masalah baru saja diselesaikan, muncul masalah baru.

The example text above also does not show any difference between the translation result of an individual translator and a collaborative translator, due to the verbose source language used in the example and not in line with the SPOK of Indonesian language. For example, in the first sentence "一个女儿对父亲抱怨她的生活,抱怨事事都那么艰难", which when translated word by word becomes "a daughter to her father complains about her life, complaining that everything is so difficult". Therefore, both individual and collaborative translators change the sentence structure into a sentence that is easily understood by readers.

The readability of the translation output

Readability refers to the extent to which a word or sentence can be understood by someone. In translation, readability is of utmost importance as the translated result will be read or understood by others to convey the message contained in the words or sentences, such as in the following example sentence.

Source texts 3:

本杰明·富兰克林说:"你有权决定自己对逆境的态度和自己的前途。"在艰 难和逆境面前,你可以学胡萝卜,鸡蛋或是咖啡豆。你可以屈服,也可以 使自己变得更坚强-甚至,你可以改变环境!

Individual translator's translation:

Benjamin Franklin berkata, "Anda memiliki hak untuk memutuskan sikap Anda menghadapi kesulitan dan masa depan Anda." Dalam menghadapi kesulitan, Anda dapat belajar dari wortel, telur, atau biji kopi. Anda bisa menyerah, Anda bisa membuat diri Anda lebih kuat bahkan, Anda bisa mengubah keadaan!

Collaborative translators' translation:

Benjamin Franklin berkata, "Anda memiliki hak untuk memutuskan sikap Anda menghadapi kesulitan dan masa depan Anda." Dalam menghadapi kesulitan, Anda dapat belajar dari wortel, telur, atau biji kopi. Anda bisa menyerah, Anda bisa membuat diri Anda lebih kuat bahkan, Anda bisa mengubah keadaan!

Thus, translators must be able to convey the message contained in the text so that it can be understood by the reader. Therefore, both individual and collaborative translators do not have differences in translating the text in terms of readability with the aim that readers can easily understand the content/meaning contained in the text.

Factors making collaborative translation different from individual translators

Several other factors such as editing and correction, time frame, and supporting tools (sources) make translating individually and collaboratively different. For

example, since collaborative translation involves multiple translators to review or provide feedback and correct each other's mistakes, the time required for collaborative translation is relatively shorter compared to the time required for individual translation. Other studies that support this finding. For example, Jiménez-Crespo (2015) notes that collaborative translation can improve the quality of the translation output by providing an opportunity for multiple translators to review and correct each other's work. In addition, Li (2014) found that collaborative translation can result in faster completion times compared to individual translation, especially for large-scale projects. Finally, Du and Li (2018) highlight the importance of collaborative editing in improving the accuracy and readability of translated texts.

Translation Process Time

Translation process time refers to the time taken by a translator to translate a text. The length of time can be influenced by several factors such as the translator's language proficiency or expertise on the topic, as well as the availability of supporting resources (collaboration). Therefore, this study found that there is a difference in the amount of time required for translation between individual translators and collaborative translators.

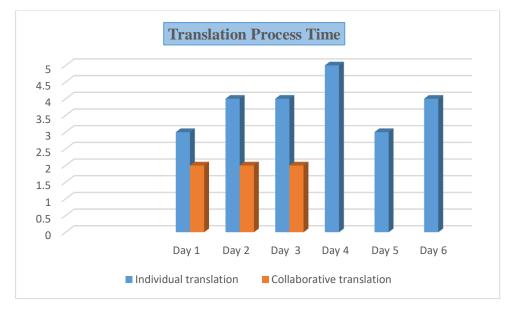


Figure 1. Translation time

Based on the graph above, it is shown that the duration needed for collaborative translation is relatively shorter compared to translating individually. The time needed for an individual translator is 6 days within a different time period, while collaborative translation only takes 3 days within the same time period of 2 hours. This is because there are several thoughts and inputs during the translation process, so the collaborative translation can be completed within 3 days. This finding is consistent with some studies (Li, 2014; Veselova & Malyuga, 2016). For example, Veselova and Malyuga, analyzed the translation of a legal text and found that

collaborative translation can lead to faster translation times compared to individual translation. The collaborative group completed the translation in a shorter amount of time than the individual translator.

Translation Errors

Errors are common in the world of translation, and factors that make translators misinterpret the source language are lack of language or topic proficiency, as well as minor errors such as improper punctuation placement. Generally, this occurs when individual translators translate texts outside of their expertise and lack precision in translation. Therefore, to anticipate errors in translation, a collaborator or reader who truly understands the field of translation is needed to assist in translating the text to produce a quality translation. This study found that there were several errors in vocabulary usage and improper punctuation placement by individual translators

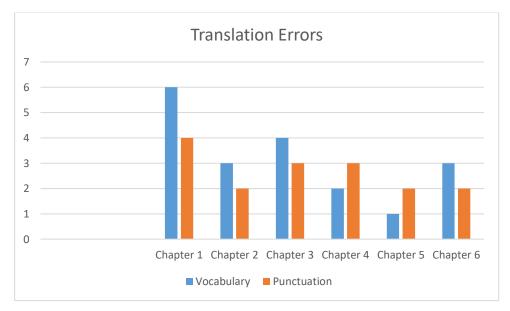


Figure 2. Translation errors

The second difference is in terms of vocabulary and punctuation used by individual translators in each chapter. According to the evaluation of the translation results of text 1 and text 2, there are differences in the use of inappropriate vocabulary and punctuation, as shown in the graph. This occurs because the language proficiency of individual translators is not at the same level as that of the collaborator, so some vocabulary used by individual translators may not be appropriate to the actual meaning. Incorrect placement of meaning on vocabulary also results in punctuation being misplaced. Therefore, the presence of collaborators in this matter is to find the true meaning of vocabulary and the appropriate placement of punctuation.

Our findings are similar to the study by Gu and Li (2014). They compared the translation quality and translation efficiency of individual translators and collaborative translators. They found that individual translators made more errors

compared to collaborative translators. The errors made by individual translators were related to grammar, vocabulary, and syntax. They found that collaborative translation produced better quality translations with fewer errors compared to individual translation. Moreover, collaborative translation was more efficient in terms of time, as the pairs of translators completed the task faster than the individual translators. Overall, the study suggests that collaborative translation can be a more effective and efficient approach for certain types of translation tasks.

The Use of Translation Aids

The use of translation aids is very helpful for a translator to find some words that are not understood or mastered. The skill factor in using translation aids also determines the translation results produced. If a translator is not skilled in using translation aids, the translation result will not be in line with the intended meaning of the source language, and the message conveyed tends to be less understood by readers. With the presence of a collaborator who has a higher level of language proficiency, their skills in using translation aids are undoubtedly better and more concise. This study found that there are several differences in the use of translation aids between individual translators and collaborative translators

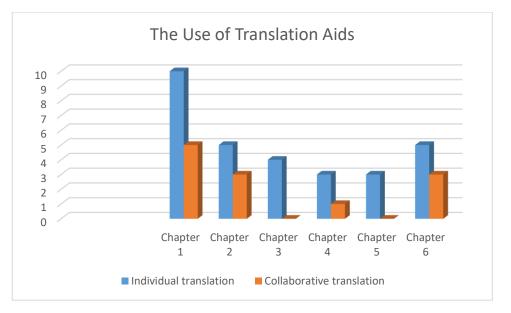


Figure 3. Translation tools

The third difference is that the graph above measures the difference in terms of the translation tools used in the translation process, where individual translators use a significantly larger number of translation tools compared to collaborative translation. This can occur because individual translators may be less skilled in using translation tools, so they have to repeatedly search for unfamiliar words using translation tools. Meanwhile, when translating collaboratively, individual translators receive more assistance and feedback from collaborators due to their more concise and proficient use of translation tools.

From the results above, the researcher concluded that collaborative translation does not have a significant impact on the content of the text, as both Text 1 and Text 2 can convey the essence of the text to the reader. Collaborative translation has an impact on accuracy, such as the use of inappropriate vocabulary, punctuation, time required to translate the text, and the use of translation tools in the translation process (Gu & Li, 2014; Jiménez-Crespo, 2015).

CONCLUSION

The study found no significant difference between the quality of translations done by an individual translator and those done collaboratively. Three factors contribute to the similarity in the quality of translations, namely, the content of the translation, the structure of the text, and the readability of the translation output. However, there are other factors that make translating individually and collaboratively different, such as editing and correction, time frame, and supporting tools (sources). The study also found that collaborative translation is relatively faster and can improve the accuracy and readability of the translated texts. It is also more efficient for largescale projects. Collaborative translation can lead to fewer errors compared to individual translation, and the collaborative translation group can complete the translation in a shorter amount of time than an individual translator. In terms of translation errors, individual translators tend to make more errors, especially in grammar, vocabulary, and syntax. Therefore, the presence of collaborators in this matter can help to find the true meaning of vocabulary and the appropriate placement of punctuation. Collaborative translation is recommended for large-scale translation projects, especially for texts outside the individual translator's area of expertise. The study suggests that translation quality can be improved by having a collaborator review or provide feedback on the work. The use of translation aids is recommended to support individual translators or to assist the collaborator. Further research can investigate the effectiveness of different collaborative translation methods and the impact of the number of collaborators on translation quality.

REFERENCES

- Al-Jarrah, M. A. (2015). Collaboration in translation: Advantages and disadvantages. International Journal of Linguistics, Literature and Culture, 1(3), 29-35
- Al-Khalifa, H. S. (2019). The impact of topic familiarity on translation quality: Individual and collaborative translation. *Journal of Language and Linguistic Studies*, 15(2), 11-29
- Artatananya. (2013). Pengaruh pendidikan, pengalaman kerja, dan komunikasi terhadap kinerja sekretaris general manager pada hotel berbintang lima di Bali. *Jurnal Bisnis dan Kewirausahaan*, 9(2), 1-12.
- Bánhegyi, M. (2012). Translation hifts and translator strategies in the Hungarian translation of Alice munro's "Boys and girls". *Central European Journal of Canadian Studies*, 8, 89 – 102.

- Deppermann, dkk. (2018). Sprache im kommunikativen, interaktiven und kulturellen kontext. Walter de Gruyter GmbH & Co KG
- Dorri, E. R., & Khani, F. (2018) Innovation in translation pedagogy using online collaborative translator training, *Translation Journal*, 21(2)
- Goethe-Institut Korea (2018) Literary translation in digital era the social translating blog. Goethe Institut Korea.
- Ginting, D., Barella, Y., Linarsih, A., & Woods, R. (2021). Emergency remote teaching practices in the perspective of cognitive load of multimedia learning theory. In R., Juppeny, L., Roshida & D., Rega (Eds.), *International Conference of Education, Social and Humanities (INCESH* 2021) (pp. 96-106). Atlantis Press
- Ginting, D. (2022). Ethical research dilemmas and their implications in English language teaching studies. *Acitya: Journal of Teaching and Education*, 4(1), 110-123. DOI: <u>https://doi.org/10.30650/ajte.v4i1.3200</u>
- Ginting, D., Sulistyo, T., Ismiyani, N., Sembiring, M.J., Asfihana, R., Fahmi, A., Suarniti, G.A.M.R., Mulyani, Y.S. (2022). English language teacher's multimedia knowledge in teaching using technology, *World Journal of English Language*, 12(6), 184-203.
- Gu, C., & Li, H. (2014). Collaborative translation vs. individual translation: A comparative study of translation errors. *Journal of Translation*, *10*(2), 27-42.
- Haladyna, T. M., Rogriguez, M. C. (2013). *Developing and validating test items*. Routledge.
- Huss, J. T. (2018) *Collaborative translation*. The Routledge Handbook of Literary Translation.
- Herman. (2014). Category shifts in the English translation of Harry Potter and the philosopher's stone movie subtitle into Indonesia (An applied linguistics study). *IOSR Journal Of Humanities And Social Science*, *19*(5), 31-38.
- Ketola, A., & García-Escribano, A. B. (2018) Social media platforms in translator training socialising or separating? *Journal Trans-Kom*, *11*(2), 183–200.
- Khrais, S. M. (2017) Literary translation and cultural challenges: Jhumpa Lahiri's the name sake, *International Journal of Comparative Literature & Translation Studies*, *5*(1), 80–86.
- Liu, Y., & Lin, W. (2019). The influence of cultural background on translation quality: a case study of Chinese-English translation. *International Journal of English Linguistics*, 9(3), 38-47
- Veselova, L. & Malyuga, E. (2016). Collaborative translation vs. individual translation: A comparative analysis of translation quality and time. *Journal of Specialised Translation*, 25, 146-166.

Nida, E. A., & Taber, C. R. (1974). The theory and practice of translation. E.J. Brill

Newmark, P. (1988). A text book of translation. Prentice Hall inc.

- Pacte. (2003). Building a translation competence model. In F. Alves (Eds.) triangulating translation: Perspectives in process oriented research. John Benjamins
- O'Brien, S. (2011). Collaborative translation. Handbook of translation studies.
- Olohan, M. (2003). How frequent are the contractions?: A study of contracted forms in the translational English corpus. *Target. International Journal of Translation Studies*, 15(1), 59-89.
- Sarwono, J. (2006). Analisis data penelitian menggunakan SPSS. Andi Offset
- Santoso, I. (2010) Analisis kesalahan kebahasaan hasil terjemahan googletranslate teks bahasa Indonesia ke dalam bahasa Jerman. Lumbung Pustaka Universitas Negeri Yogyakarta.
- Song, M., & Li, D. (2017). Collaborative translation revisited: A study of performance and interaction in collaborative translation. *Target*, 29(1), 5-24
- Sugiyono (2017). Metode penelitian kuantitatif, kualitatif dan R&D. Alfabeta.
- Suryawinata, Z., & Hariyanto, S. (2016). *Translation: bahasan teori & penuntun.* Media Nusa Creative.
- Suryawinata, Z., Zuchridin., & Sugeng, L. (2003). *Translation bahasan teori dan penuntun praktis menerjemah*. Kanisius.
- Snell-Hornby, M. (1988). Translation studies: An integrated approach. John Benjamins.
- Risku, H., & Windhager, F. (2013). "Extended translation: A socio-cognitive research agenda." *Target: International Journal of Translation Studies*, 25 (1). 33–45.
- Usman, H. (2011). Manajemen: Teori, praktik dan riset pendidikan. Bumi Aksara.
- Wang, X., & Li, J. (2020). A comparative study on the effect of translation memory on individual and collaborative translation. *Computer-Assisted Language Learning*, 33(1-2), 131-152