Auris AI-Generated Indonesian Subtitle Scary Girl Cartoon: a Translation Study

Qurrotul Aini¹, *Ahmad Yusuf Firdaus², Yopi Thahara³
¹,²,³ Universitas Abdurachman Saleh Situbondo, Indonesia
(*yusuffirdaus@unars.ac.id)

Abstract

Foreign films have become, increasingly, a regular feature on Indonesian screens. A key point, in short, is that audiences need a good translation in order to understand and enjoy these movies. New technologies like those offered by Auris AI make translating all kinds of video motion pictures onto paper easier. But to turn this into a tool which truly benefits people, it is essential to assess the quality of translations. This paper studies the translation quality of phrasal verbs generated by Auris AI in *the Cartoon Scary Girl* (2023) in terms of accuracy, acceptability and readability. The aforementioned techniques are then applied to translation and the quality of a translated text measured using Nababan's framework. Phrasal verbs were systematically listed into a table and analysed according to the guidelines given in Spradley theory. As a result, despite Auris AI's claims of achieving up to 99% accuracy with high-quality transcriptions, the study found that the overall translation quality was medium with the average score is 2,24 out of 3,00 or 74,6%. It shows that Auris AI's high claim for translation accuracy is really just a kind of image appealing to the customers. The assessment incorporated three terms: accuracy, which scored 2.25 or 75%; acceptability, which also scored 2.25 or 75%; and readability, which scored 2.24 or 74.6%. These results showed that the translations often do not convey the intended meaning, lack naturalness, and have only a moderate level of clarity and comprehensibility..

Keywords: Translation Technique; Translation Quality; Auris AI.

The movie industry has seen rapid growth over the years, with globalization playing a crucial role in its expansion. Ellis (2001), in his book *Movies and Meaning*, describes film as a widely viewed visual medium that is often produced in familiar formats with recognizable stars. Films reflect a range of knowledge and experiences to their audiences. They can be entertaining, romantic, tragic, or even educational, offering insights into history, society, and human life. Watching movies has also become a popular way to unwind, with cartoons being among the most watched due to their unique features, engaging characters, entertaining storylines, and broad appeal across all age groups. According to John (2002), cartoons are a form of visual art typically characterized by an unrealistic or semi-realistic

style, often used for satire, caricature, or humor. They can consist of a single image or a series of images, and in the context of motion pictures, they refer to animations created through a sequence of illustrations.

Nowadays, people can easily access cartoons from around the world using smartphones. However, the language used in these cartoons is often foreign, making it difficult to understand. For instance, all Disney cartoons are in English, which poses a challenge for Indonesians who do not speak the language, making it hard for them to enjoy the content without translation. To ensure viewers fully understand the movies, producers need to translate the content from English into other languages. According to Catford (1965), translation is the process of transferring meaning from the source language (SL) to the target language (TL). This means that translation involves conveying the original message from one language (SL) to another (TL) while preserving its intended meaning, using equivalent expressions from the source language. Wicaksono and Kuswardani (2019) explain that subtitles are the textual representation of this translation process in audiovisual media. They appear alongside the original spoken or written language, allowing viewers to understand and enjoy foreign films by reading clear and precise translations displayed at the bottom of the screen.

Due to its global impact, Artificial Intelligence (AI) is increasingly relied upon to simplify human tasks, including translation. AI translation refers to platforms or websites powered by AI that can translate words or sentences from one language to another. It offers practical usage, quick results, and lower costs. In this regard, AI translation presents several advantages over human translator services, which may not always be available, require more time to produce results, and can be costly. These benefits explain why many people prefer AI translation over human translation services. Auris AI is an example of a machine translation system that utilizes AI technology.

With Auris AI, users can effortlessly convert audio from a video into text and add subtitles using the Auris Artificial Intelligence. This free online transcription and translation tool is particularly focused on Asian languages, including Bahasa Indonesia, Tamil, and Japanese, making translation tasks more convenient. For instance, if someone needs to translate an English document into Indonesian, they can simply copy the text into Auris AI, which will process it quickly, allowing them to paste the translated result. Additionally, Auris AI can be used for subtitling, taking about 15 minutes or more to generate a written document that is automatically integrated into the video. However, concerns remain about the quality of AI translation tools, as they often produce inaccurate translations. Unlike professional linguists, AI tools lack the deep understanding and nuance of the source language (SL), which can lead to misunderstandings and confusion among users.

Several studies have also explored translation quality. Sumiati et al. (2022) investigated the accuracy of Google Translate in their study titled *The Analysis of Google Translate Accuracy in Translating Procedural and Narrative Texts*. The study aimed to: (1) assess the accuracy of Google Translate when translating Procedural and Narrative Texts, and (2) compare the accuracy between these two text types. Bidah et al. (2024) conducted a study titled *ChatGPT in Indonesia-Arabic Translation: A Quality Analysis*, examining the effectiveness of ChatGPT in translating Indonesian texts into Arabic. This study employed Translation Quality Assessment (TQA) theories based on the works of Peter Newmark, Juliane House, and Christiane Nord. Chatzikoumi (2020), in the study *How to Evaluate Machine Translation: A Review of Automated and Human Metrics*, reviewed methods for assessing machine translation (MT) quality, aiming to categorize and explain evaluation metrics with a focus on the challenges of neural machine translation

(NMT). Despite these studies, gaps remain, particularly in the object, focus, and purpose of the analysis. To address these gaps, this research analyzed the translation quality of phrasal verbs in *the cartoon Scary Girl* (2023) as generated by Auris AI. The researcher believed that the translation quality of the subtitles in *the cartoon Scary Girl* needed to be examined, as this topic had not yet been explored. This research aimed to identify the translation techniques used and evaluate the translation quality provided by Auris AI in *the cartoon Scary Girl* to determine whether it meets high standards for most contexts or still requires review and editing by a human professional. Consequently, this research focused specifically on the translation quality of phrasal verbs to make the study's findings more precise.

Nida & Taber (2003) explained that translation involves producing the closest natural equivalent of the source language message in the target language, with an emphasis on conveying meaning first and style second. Thus, the objective of translation is to transfer both the meaning and style of the source text (ST) into the target language (TL) while maintaining equivalence. However, achieving a perfect translation is impossible due to the differing styles between the two languages. As a result, Brislin (1976) describes translation as the process of aligning the syntactic, lexical, and stylistic systems that shape the functioning of both the source language (SL) and the target language (TL). The surface structure of the SL is referred to as the syntactic system, the meaning corresponds to the lexical system, and the stylistic system pertains to the style of the SL. This underscores the importance of the translator in identifying the appropriate equivalent for each word when translating a text.

In the realm of AI translation, these challenges are even more pronounced. According to Koehn (2020), AI translation involves translating text from one language to another using artificial intelligence, specifically through machine learning algorithms and statistical models, without human intervention. This method of machine translation uses sophisticated techniques to analyze language patterns and probabilities, allowing for fast and efficient translations. AI translation is continually advancing and has the potential to dominate the translation market due to its efficiency, cost-effectiveness, and capacity to improve from feedback. However, it may not be suitable for all types of translations, particularly those that are complex or creative, where human translators generally excel.

Auris AI serves as a practical example of AI translation, providing AI-driven transcription, translation, and subtitling services with a focus on Asian languages such as English, Indonesian, Malay, Mandarin, Thai, Tamil, and Japanese. Auris AI claims that its speech-to-text technology can achieve up to 99% accuracy, supported by an in-house team of native language experts who handle transcription and proofreading. However, House (1997) argued that translation evaluation is based on the notion that the quality of a translation depends on the translator's subjective interpretation and transfer choices. These decisions are shaped by the translator's intuitive linguistic and cultural knowledge and experience.

To overcome these challenges and ensure accurate and effective translation, the use of translation techniques is essential. Molina & Albir (2002) define translation techniques as methods for evaluating and categorizing the way translation equivalents operate. They classify these techniques into eighteen distinct categories: 1) Adaptation, 2) Amplification, 3) Borrowing, 4) Calque, 5) Compensation, 6) Description, 7) Discursive Creation, 8) Established Equivalent, 9) Generalization, 10) Linguistic Amplification, 11) Linguistic Compression, 12) Literal Translation, 13) Modulation, 14) Particularization, 15) Reduction, 16) Substitution, 17) Transposition, and 18) Variation. By employing these techniques, translators—whether human or AI—can more effectively navigate linguistic

nuances and produce higher-quality translations.

In this context, House (1997) emphasized the necessity of a translation theory to properly assess the quality of a translation. Different perspectives on translation lead to varying concepts of translation quality, resulting in diverse evaluation methods. Acknowledging the significance of translation quality, numerous studies have stressed the importance of determining whether a translation is equivalent, acceptable, and effective. To systematically evaluate translation quality, the researcher has chosen the framework developed by Nababan et al. (2012), which emphasizes three key criteria: accuracy, readability, and acceptability. These criteria are assessed at three levels: for accuracy—accurate, less accurate, and inaccurate; for acceptability—acceptable, less acceptable, and unacceptable; and for readability—high, medium, and low. By applying these criteria, translators can ensure that their work meets the necessary standards in all areas, resulting in more reliable and effective translations.

1. Accuracy
   Accuracy refers to the equivalence of meaning between the source language (SL) and the target language (TL). It refers to a translation that accurately conveys the information or message from the SL in a manner that is correct, precise, and faithful to the original intent of the SL author.

2. Acceptability
   Acceptability evaluates how natural the language used in the translation is. In some languages, specific phrases, sentences, or terms may not be common in others. It is the translator's responsibility to select the appropriate words so that the translation feels natural to the readers. The translation will have a high level of acceptability if readers perceive the translation as natural and familiar.

3. Readability
   It assesses the clarity with which the message is conveyed from the source language (SL) to the target language (TL) in various forms. A translation should adopt a style that enables readers to easily understand the text. The readability level evaluates how easily the reader can read and comprehend the translation.

Expanding on the earlier discussion about translation techniques and quality assessment, this research centers on evaluating the translation work of Auris AI. Specifically, this study aims to answer the following research questions: First, what translation techniques does Auris AI use to translate phrasal verbs in *The Cartoon Scary Girl* (2023)? Second, how does the translation quality of these phrasal verbs, as reflected in the subtitles generated by Auris AI, fare in terms of accuracy, readability, and acceptability?

The objectives of this research are closely aligned with these questions. The study aims to identify the specific translation techniques employed by Auris AI in translating phrasal verbs in T*he Cartoon Scary Girl* (2023). Additionally, it seeks to analyze the translation quality of these phrasal verbs in the subtitles, assessing whether the translations are accurate, readable, and acceptable based on established criteria. This investigation will enhance understanding of the effectiveness of AI translation tools in managing complex language elements like phrasal verbs.

Method

Data collection is a crucial phase in any research process, as it involves gathering relevant information from various sources to address the research questions and assess the outcomes. In this study, the data collection process was meticulously designed to examine the translation techniques and quality of phrasal verbs in the subtitles of *The Cartoon Scary Girl* (2023) generated by Auris AI. This research employed two methods: content analysis and Focus Group Discussion (FGD)

to gather the data. The systematic approach included the following steps:

1. The researcher used Auris AI to subtitle The Cartoon Scary Girl (2023).
2. The researcher analyzed the cartoon multiple times.
3. The researcher collected the phrasal verbs found in the cartoon.
4. The researcher categorized the phrasal verbs based on the translation techniques applied.
5. Finally, the data were recorded in a table.

To support this research, the researcher enlisted three informants to evaluate the translation quality in terms of accuracy, acceptability, and readability. The informants were selected based on the following criteria:

1. Accuracy Informant:
   a. Must be a professional translator with experience in translating scientific texts from English to Indonesian.
   b. Should possess strong translation skills, including language competence, discourse competence, cultural competence, domain competence, strategic competence, and transfer competence.
   c. Must have both declarative knowledge and procedural or operational knowledge.
2. Acceptability Informant:
   a. Should have a thorough understanding of standard Indonesian grammar usage.
   b. Must be knowledgeable in the relevant field related to the translated text.
   c. Should be familiar with the technical terms specific to the field of the translated text.
3. Readability Informant:
   a. Must be proficient in reading and understanding Indonesian texts.
   b. Should be at least 11 years old, in line with the age range appropriate for the cartoons being studied.

The informants were required to complete three types of questionnaires to assess the quality of translation based on accuracy, acceptability, and readability, using scales established by the researcher. These scoring scales for translation quality assessment were adapted from Nababan (2010).

Result and Discussion

In the Indonesian-English subtitles of The Cartoon Scary Girl (2023), a total of 110 phrasal verbs were identified. Auris AI applied 8 out of the 12 translation techniques proposed by Molina and Albir to translate these phrasal verbs, including the following:

Transposition

D47
SL: She has this habit of bringing out the best in me.
TL: *Dia memiliki kebiasaan untuk membawa yang terbaik dalam diriku.*

The translation of "bringing out" as "*membawa*" employs a technique known as transposition. This technique involves altering the grammatical category (part of speech) of a word or phrase without changing its meaning, converting the phrasal verb into a simple verb. This simplification adjusts the grammatical structure while maintaining the original meaning, making the translation fit the grammatical and stylistic norms of the target language (Indonesian) to ensure clarity and naturalness.

While the translation is reasonably accurate, it could be more precise. A more accurate rendition might be "*mengeluarkan yang terbaik dalam diriku,*" which better captures the idiomatic nuance of "bringing out." Acceptability relates to how natural the translation sounds to native speakers of the target language. Although "*Dia memiliki kebiasaan untuk membawa yang terbaik dalam diriku*" is grammatically correct and understandable in Indonesian, the phrase "*membawa yang terbaik dalam diriku*" might sound somewhat awkward to native speakers, reducing its acceptability. Readability measures how easily the translated text can be read and

understood. The translation has a medium level of readability, and refining the verb choice could improve the flow and make it sound more idiomatic.

Established Equivalent

D01
SL: We are still waiting on what you promised us.
TL: *Kami masih menunggu apa yang anda janjikan.*

The translation of the phrasal verb "waiting on" as "*menunggu*" is an appropriate choice, utilizing the equivalence technique in translation. This technique is used when a phrase in the source language (SL) has a direct and suitable equivalent in the target language (TL), ensuring that the translation is accurate and contextually relevant. In this case, "waiting on" suggests anticipating or expecting something from someone, which corresponds well with the Indonesian verb "*menunggu*." Considering the film's context, where characters likely express anticipation or expectation, "*menunggu*" effectively captures this meaning. This equivalence guarantees that the translated dialogue preserves the original intent and emotional nuance, ensuring clarity and maintaining the narrative's integrity.

The translation received a perfect score of 3 for accuracy, acceptability, and readability. This high score reflects the translation's accuracy, as it accurately conveys the meaning and nuances of "waiting on." It is also acceptable because "*menunggu*" is a culturally appropriate and familiar term for the target audience. Additionally, the translation has a high readability level, making it clear, natural, and easy to understand. By employing the equivalence technique, the translation achieves a high-quality result that effectively communicates the intended message.

Discursive Creation

D30
SL: I can't turn it off!
TL: *Aku tidak bisa buka!*

The phrasal verb "turn it off" was translated as "*buka*," which means "open" in Indonesian. This translation changes the original meaning of the SL phrase, as "turn it off" refers to stopping or deactivating a device, while "*buka*" means to open something. This translation exemplifies the discursive creation technique, where "*buka*" does not directly translate "turn it off" but instead introduces a completely different action. The appropriate translation for "turn it off" would be "matikan" or "*mematikan*," which accurately convey the action of deactivating a device. Using "*buka*" introduces a new concept, which results in a loss of the original meaning and demonstrates discursive creation by deviating from a direct and accurate translation. As a result, the translation becomes unclear, unnatural, and unacceptable to native speakers.

The translation received a score of 1 for accuracy, readability, and acceptability from each informant, indicating that it is inaccurate, unacceptable, and has a low readability level. This low score suggests that discursive creation can negatively impact translation quality when it significantly alters the intended message.

Literal Translation

D02
SL: I think I am tapped out.
TL: *Saya pikir saya telah dipecahkan.*

In this instance, the phrase "tapped out" is translated as "*dipecahkan*." While "dipecahkan" might be a literal translation, it does not convey the intended meaning in context. Here, "tapped out" refers to being exhausted or having run out of resources, as Bunny guru has no remaining funds to continue gambling. To improve accuracy, a more suitable translation would be phrases that reflect a sense of depletion or lack of resources, such as "*dikalahkan*" or "*tidak punya uang*," which better align with Indonesian colloquial usage.

The translation of "tapped out" as "*dipecahkan*" compromises the translation

quality. It is inaccurate as it misinterprets the original meaning, reduces readability by interrupting the flow and comprehension of the text, and lacks acceptability because it does not fit naturally in the target language. As a result, this translation is deemed inaccurate, unacceptable, and has a low readability level.

Reduction

D19
SL: Because when it turns out, I was right and there is no Octopus, we can blame it on those two knuckleheads.
TL: *Karna saatnya aku benar tidak ada octopus, kita bisa menyalahkan kedua duanya.*

The phrasal verb "turns out" was omitted in the translation, exemplifying the reduction translation technique, where certain elements from the source text are left out in the target language. The phrase "turns out" signifies that something becomes apparent or is revealed to be true after some consideration or event. In this case, the omission of "when it turns out" leads to a loss of its meaning and nuance. This phrase is essential for indicating a condition or outcome, and its absence diminishes the sentence's conditional aspect, resulting in a misrepresentation of the original intent. Additionally, the lack of "turns out" disrupts the sentence's structure and flow, potentially confusing the reader and diminishing the overall effectiveness of the translation.

Consequently, the exclusion of "turns out" through the reduction technique adversely affects the translation quality, making it inaccurate, unacceptable, and of low readability.

Linguistic Compression

D04
SL: Morning. Come on in.
TL: *Selamat pagi. Masuklah.*

In translating "morning, come on in" to "*selamat pagi, masuklah,*" the phrasal verb "come on in" is translated as "*masuklah.*" This approach uses the technique of linguistic compression, where the translation conveys the meaning more concisely, often at the expense of some elements of the original phrase. In English, "come on in" combines an invitation ("come on") with a directive ("in"), where "come on" gently encourages or invites the listener, and "in" specifies the action of entering. In Indonesian, "*masuklah*" captures the essential directive to enter but omits the softer invitation implied by "come on." Despite this, "*selamat pagi, masuklah*" successfully conveys the main intent and meaning of the original phrase, with the nuance of gentle encouragement compressed into the more direct "*masuklah.*" This method of linguistic compression ensures that the translation remains efficient and contextually appropriate. The translation is accurate as "*masuklah*" effectively communicates the imperative to enter implied by "come on in." While the original English phrase carries a friendly and inviting tone, "*masuklah*" is clear, direct, and easily understood, enhancing readability. The translation is also highly acceptable to native Indonesian speakers, as "*masuklah*" is a natural and commonly used term. It aligns well with the linguistic and cultural norms of Indonesian, making the translation sound natural and suitable. Thus, the use of linguistic compression results in a translation that is accurate, acceptable, and highly readable.

Linguistic Amplification

D29
SL: Collision ahead. Pull up! Pull up!
TL: *Tabrakan didepan. Naik ke atas! Naik ke atas!*

The phrasal verb "pull up" is translated as "*naik ke atas,*" meaning "go up" or "climb up" in Indonesian. This translation utilizes the technique of linguistic amplification to clearly convey the action and urgency implied by "pull up" in the original English phrase. In this context, "pull up" refers to the need to quickly ascend or climb to avoid an obstacle or collision. The phrase "*naik ke*

atas" effectively captures this sense of rapid ascent. By providing explicit instructions to "*naik ke atas,*" the translation ensures that the urgency and critical nature of the action are communicated clearly in Indonesian.

This translation is deemed accurate because "*naik ke atas*" appropriately conveys the urgent directive to ascend. It is also highly acceptable, as "*naik ke atas*" is a natural and suitable expression in Indonesian, aligning with native speakers' linguistic norms and expectations. Furthermore, the translation exhibits high readability because it is direct, clear, and easy to understand, making it effective in conveying the intended command, particularly in an emergency situation.

Generalization

D106
SL: Maybee! You don't get to destroy this world and simply run away.
TL: Maybee! *Kamu tidak bisa menghancurkan dunia ini dan hanya lari.*

The phrasal verb "run away" is translated as "*lari,*" which means "to run" in Indonesian. This translation employs the technique of generalization, as "*lari*" covers a range of meanings related to running, including escaping or fleeing. The English "run away" specifically implies leaving to avoid something or escaping from a situation. By using "*lari,*" which broadly means "to run," the translation encompasses various aspects of running, but it lacks the specific nuance of escaping or fleeing.

As a result, the translation "*lari*" is less accurate because it does not fully capture the escape connotation of "run away." A more precise translation would be "*melarikan diri,*" which directly conveys the idea of escaping or running away. Although "*lari*" is a generally acceptable term in Indonesian, it does not fully reflect the intent of avoiding or fleeing. The readability of "*lari*" is high since it is a straightforward term easily understood by

Indonesian speakers. Thus, while "*lari*" is clear and readable, it falls short in accuracy and acceptability due to its general nature.

Based on the study's findings, the overall translation quality of Auris AI is assessed as medium. The average accuracy score is 2.25 out of 3.00, indicating that Auris AI's translations frequently struggle to effectively convey the intended meaning from the source language to the target language. The average acceptability score is also 2.25 out of 3.00, suggesting that the translations are not particularly natural or appropriate in the target language. For readability, the average score is 2.24 out of 3.00, indicating only a moderate level of clarity and ease of understanding. These results contrast with Auris AI's claim of up to 99% accuracy and their use of an in-house team of native language experts for proofreading. The study reveals that the overall translation quality score of 2.24, or 74.6%, falls short of the company's high assertions, highlighting the need for significant improvements in accuracy, acceptability, and readability.

The correlation indicates that the medium quality of Auris AI's translations may be due to the use of less effective translation techniques. Improving these techniques could enhance the accuracy, acceptability, and readability of translations, aligning them more closely with Auris AI's claims of high-quality transcription and 99% accuracy. House (2014) notes that "Effective use of translation techniques is crucial for maintaining accuracy and naturalness in machine translation outputs" (p. 112), emphasizing the need for techniques like transposition, established equivalence, and adaptation to ensure high-quality and readable AI translations. The transposition technique, which allows for adjustments in grammatical structure or word classes, can help achieve syntactic and semantic accuracy in the target language (Garcia, 2023). This study found that many phrasal verbs in *The Cartoon Scary Girl* (2023) were translated using transposition, leading to high scores in accuracy, acceptability, and readability. This

is because transposition effectively modifies grammatical structures and word classes, ensuring that translations are contextually and syntactically appropriate.

In this study on translating phrasal verbs from English to Indonesian in the subtitles of *Scary Girl*, the predominant technique used by Auris AI is transposition, accounting for 37.76% of the translations. This is due to the practice of translating English phrasal verbs into single verbs in Indonesian. English phrasal verbs, which combine a verb with a preposition or adverb (like "give up" or "take off"), lack direct grammatical equivalents in Indonesian. Instead, Indonesian often employs single verbs or alternative grammatical structures to express similar meanings. This translation process involves altering the grammatical category of words. For instance, the English phrasal verb "waiting for" is translated as the Indonesian verb "*menunggu*." This shift from a phrasal verb to a simple verb illustrates the transposition technique. By using this technique, Auris AI effectively adapts the meaning and structure of English phrasal verbs to align with Indonesian grammatical norms, highlighting the differences between the two languages.

Conclusion

Auris AI's translation quality of phrasal verbs in the Scary Girl cartoon was rated as medium, with an overall score of 74.6%. The translations scored 2.25 out of 3.00 for accuracy, 2.25 out of 3.00 for acceptability, and 2.24 out of 3.00 for readability. These scores indicate that the translations often fail to accurately convey meanings, appear unnatural, and lack clarity. Substantial improvements are needed in Auris AI's translation techniques to enhance quality and meet user expectations. Despite Auris AI's claims of achieving up to 99% accuracy with the assistance of native language experts, this study presents a different picture. The average translation quality of Auris AI is only moderate, falling short in terms of accurately conveying meanings from

the source language to the target language and lacking the desired levels of acceptability and readability expected of high-quality translations. Significant improvements are required in all aspects of translation quality.

References

Abidah, N. K. K., Hikmawati, R., & Erawanto, V. (2024). ChatGPT in Indonesia-Arabic Translation: A Quality Analysis. *Al-Arabi: Journal of Teaching Arabic as a Foreign Language,* 8(1), 33–52. https://doi.org/10.17977/um056v8i1p33-52

Azar, B. (2006). *Fundamentals of English Grammar* (3rd edition). longman.

Brislin, R. W. (1976). *Translation: Application and Research* (R. B. W & R. W. Brislin,

Eds.). Gardner Press.

Catford, C. J. (1965). *A Linguistic Theory of Translation: An Essay in Applied Linguistics* (Vol. 103). Oxford U.P.

Chatzikoumi, E. (2020). How to Evaluate Machine Translation: A Review of Automated and Human Metrics. *Natural Language Engineering*, 1–25. https://doi.org/10.1017/S1351324919000469

Ellis, R. (2001). Movies and Meaning. *The Expository Times*, 112(9), 304–308.

Garcia, A. (2023). Advances in AI Translation Techniques. *Journal of Artificial Intelligence*, 10(2), 45–60.

House, J. (1997). *Translation Quality Assessment: A Model Revisited*. Gunter Narr Verlag.

House, J. (2014). Translation Quality Assessment: Past and Present. *In Translation: A Multidisciplinary Approach* (pp. 241–264). Palgrave Macmillan UK. https://doi.org/10.1057/9781137025487_13

John A, L. (2002). Cartooning in Africa. *Journal of African Cultural Studies*, 15(2), 127–144.

Koehn, P. (2020). *Neural Machine Translation*. Cambridge University Press.

Molina, L., & Albir, A. H. (2002). Translation Techniques Revisited: A Dynamic and Functionalist Approach. *498 Meta*, XLVII, 4.

Nababan, M. (2010). *Pengembangan Model Penilaian Kualitas Terjemahan. Universitas Sebelas Maret*. Fakultas sastra dan Seni.

Nababan, M., Nuraeni, A., & Sumardiono, &. (2012). Pengembangan Model Penilaian Kualitas Terjemahan. *Kajian Linguistik dan Sastra,* 24(1), 39–57.

Nida, A. E., & Taber, R. C. (2003). *The Theory and Practice of Translation* (4th ed.). Brill.

Russell, S., & Norvig, P. (2020). *Artificial Intelligence: A Modern Approach* (4th ed.).

Safei, H. N., & Salija, K. (2018). The naturalness and accuracy of English short story translation into Indonesian. *ELT Worldwide*, 5(1), 44-53.

Spradley, J. P. (1980). *Participant Observation*. Holt, Rinehart and Winston.

Sumiati, Baharuddin, & Saputra, A. (2022). The Analysis of Google Translate Accuracy in Translating Procedural and Narrative Text. *JEEF (Journal of English Education Forum)*, 2(1), 7–11.

Wicaksono, R. D., & Kuswardani, Y. (2019). Translation Analysis of Subtitle from English into Indonesian in The Raid 2 Movie. *English Teaching Journal: A Journal of English Literature, Linguistics, and Education*, 7(2), 79–85. https://doi.org/10.11591/etj.v7i2.5439