

Evaluating ChatGPT's Translation of Harry Potter: A Qualitative Study of Translation Techniques, Accuracy, and Acceptability

P-ISSN 2721-1096

E-ISSN 2721-1916

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Abstract

This research investigates the translation techniques employed by ChatGPT in translating J.K. Rowling's Harry Potter and the Sorcerer's Stone, focusing on the accuracy and acceptability of the translations produced. Utilizing a qualitative approach, the study analyzes data from the original English text, the Indonesian translation generated by ChatGPT, and feedback from five evaluators based on predetermined criteria. The data analysis process involved comparing the source and target texts to categorize translation strategies and calculating average scores from raters. The findings reveal that ChatGPT effectively utilized various translation strategies, with *Translation by Paraphrase Using a Related Word being the most used* (62%). Other strategies included *Translation by a More Neutral or Less Expressive Word* (24%) and *Translation by a More General Word* (8%). The overall accuracy score was relatively high; however, challenges arose in maintaining acceptability, particularly regarding expressive tones and cultural nuances. This study contributes significantly to understanding AI's role in literary translation, showcasing both its potential and limitations in handling complex literary elements. By highlighting these aspects, it advances the discourse on AI's evolving capabilities in creative fields.

Keywords

Artificial Intelligence, ChatGPT, Harry Potter, Translation

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INTRODUCTION

Translation is a transfer process, which aims to convert the written text of the source language into the most acceptable target language, so that it requires syntactic, semantic, and pragmatic understanding as well as the ability to analyze the source language (Apriliya et al., 2020). In multilingual communication, the ability to understand the message of the source and target languages is very important. Translation plays an important role in accurately preserving the meaning, context and purpose area in inter-language communication. However, translation is not just a word-for-word transfer; it requires knowledge of the nuances provided by a language, such as linguistic context, idiomatic expressions, and the purpose of the text being translated. Translation becomes even more complex when dealing with literary works, where the translator must pay attention to creative language usage, complex dialogue between characters, and unique narrative style (Harjanti. 2020). Works of literature often contain cultural references, emotional depth, and stylistic elements that pose challenges for even professional translators. This is why translations in the field of literature must be carefully considered from the use of strategies to produce accurate and acceptable translations to ensure that the target audience gets the same experience when reading as the original author intended (Hang 2018).

The emergence of Artificial intelligence (AI) in the field of translation, especially AI in models such as ChatGPT with a variety of capabilities provides new challenges. ChatGPT as one of the most widely used AIs has the ability to regenerate text and also translate languages very efficiently (Khanna et al. 2024). Its ability to process and produce outputs quickly and widely brings a big change in the way tasks are completed and translated. However, using AI to translate literature is a very interesting topic to discuss. Literature is unique in that it requires knowledge of cultural nuances and stylistic intricacies that may not always be as aligned and structured as the output that AI usually produces. Analysing how ChatGPT approaches translating literature can provide new insights into the limitations, strengths and potentials of AI. This phenomenon will be particularly relevant in the current era where AI is evolving and heading towards creative and more professional fields.

The translations produced by ChatGPT are compelling to analyze from two perspectives: strategy and quality. Translation strategies are defined as linguistic approaches employed to navigate the challenges of translating across languages (Darma & Pratama 2015). ChatGPT mimics many of the same strategies used by human translators, such as employing more general terms, cultural substitutions, or paraphrasing. These strategies can be evaluated using established frameworks, such as Mona Baker's taxonomy (2018), which categorizes translation strategies based on their role in overcoming linguistic and cultural barriers. Additionally, the quality of translations can be assessed through parameters like accuracy and acceptability, as outlined by Nababan et al. (2012). By examining these aspects, this research highlights ChatGPT's capabilities while identifying areas where its performance aligns with or diverges from human translation norms.

This research focuses on the translation of the novel *Harry Potter and the Sorcerer's Stone* produced by ChatGPT. Written by J.K. Rowling, the novel has a rich narrative, imaginative world-building and complex language usage. It includes a mixture of colloquial expressions, cultural references and fantastic terminology that requires careful handling to maintain the essence of the original text. *Harry Potter and the Sorcerer's Stone* has become a cultural phenomenon with a globally widespread readership, making its translation an impactful case study (Badruzaman 2021). By choosing this novel, the researcher can explore how well ChatGPT can translate complex literature elements and whether the translation matches the expectations of readers who are familiar with the original work. The decision to focus on the first hundred sentences of the novel was chosen in order to ensure a manageable yet representative sample for in-depth analysis.

Several previous studies have explored various aspects of AI in translation that offer important insights into the potential and limitations of AI. Some of these studies include Khanna et al. (2024), which focused on the clarity and accuracy of translation in healthcare communication, showed that ChatGPT was able to simplify technical text for non-specialist readers. Castilho (2023), conducted research on how pickled machine translation's handle context challenges such as lexical ambiguity and grammatical nuances. Zhao (2021), also conducted similar research by adding a network system to machine translation with the results showing significant performance improvement. Kocmi and Federmann (2023), evaluated the capabilities of GPT-4 with the aim of assessing the quality of translation which showed that the assessment results were in line with human judgement. In addition, research from Liu et al. (2020) as well as (Wang 2023), highlighted the pros and cons of AI translation, and emphasised its efficiency. Most of these studies emphasise advances in AI translation but still focus on technical or non-literary texts, leaving a significant gap in understanding AI's application to the literary field.

This research builds on these prior studies by shifting focus to the literary field, specifically analyzing ChatGPT's performance in translating *Harry Potter and the Sorcerer's Stone*. By employing Mona Baker's (2018) translation strategy framework and Nababan et al.'s (2012) model of accuracy and acceptability, this study examines how well ChatGPT handles the cultural nuances, idiomatic expressions, and narrative style inherent in literary texts. This approach extends the scope of previous research by addressing the unique complexities of literary translation, offering critical insights into AI's strengths and limitations. Furthermore, this research contributes to the broader discourse on AI's evolving role in translation practices and its implications for the future of the field, particularly in reshaping how literary works are translated and received across languages and cultures.

LITERATURE REVIEW

1. Challenges in Literary Translation

Translation quality and accuracy remain significant challenges in the field of machine translation, particularly with the emergence of new AI-powered translation tools. Recent

studies by Khanna et al. (2024) and Kocmi & Federmann (2023), have demonstrated that large language models like GPT-3.5 and GPT-4 show promise in translation quality assessment, though they still face challenges in certain contexts. Research by Sudarmaji et al. (2023), identified persistent language errors at semantic, morphological, and syntactic levels in machine translations, highlighting the need for continued improvement. Studies by Ruhmadi & Al Farisi (2023), specifically found that ChatGPT exhibits various morphological errors when translating between Arabic and Indonesian, indicating that even advanced AI models face challenges with complex linguistic structures.

2. AI in Translation Studies

The evolution of machine translation technology has progressed through several significant stages, as documented in the literature. Lopez (2008), described the development from Rule-Based Machine Translation (RBMT) to Statistical Machine Translation (SMT), highlighting the advantages and limitations of each approach. Bahdanau et al. (2015), introduced neural machine translation (NMT) methods, which demonstrated improved context understanding and idiomatic translation capabilities. Recent research by Chen (2024), shows that AI integration in translation significantly improves accuracy and efficiency, while providing personalized learning support for translation education.

Previous studies have identified specific challenges in machine translation across different language pairs and contexts. Research by Castilho (2023), revealed that while punctuation changes significantly affect translation output, context position has minimal impact. Tan and Wang (2024), developed a semantic context-aware quality scoring method using pre-training language models to improve translation evaluation. Studies by Hasyim et al. (2021) and Daniel & Mitra (2024), demonstrated that research comparing AI and human translation capabilities, while AI excels in speed and consistency, human translators outperform AI in adapting to cultural nuances and stylistic variations.

3. Theoretical Frameworks

The theoretical foundation for translation quality assessment draws from several seminal works in translation studies. Di & Nida (2006), established the fundamental concepts of formal and dynamic equivalence, which remain crucial in evaluating translation quality. Newmark (2009), further developed these ideas through semantic and communicative translation approaches, providing additional frameworks for quality assessment. Baker (2018), proposed specific translation strategies to address cultural and linguistic differences, including methods like translation by cultural substitution and translation by paraphrase. Nababan et al. (2012), synthesized these approaches into a structured evaluation framework based on three main criteria: accuracy, acceptability, and readability.

The current research aims to bridge gaps in understanding ChatGPT's translation capabilities by analyzing its translation strategies and quality when translating literary texts, specifically focusing on the first hundred sentences of Harry Potter and the Sorcerer's Stone. Since the complexity of the language and culture, it has numerous

complexity to translate (Suwondo & Hamsia, 2023). This study employs Baker's (2018) translation strategies framework and Nababan et al. (2012) quality assessment criteria, focusing specifically on accuracy and acceptability. Unlike previous studies that primarily focused on technical or news texts, this research examines literary translation, which presents unique challenges due to its creative and cultural elements. The study's methodology includes detailed analysis by qualified raters who must meet specific criteria, including familiarity with both the source material and language pairs, ensuring a comprehensive evaluation of ChatGPT's literary translation capabilities.

RESEARCH METHOD

This study adopts a qualitative approach and applies content analysis to investigate the translation strategies and assess the translation quality produced by ChatGPT. The analysis focuses on the first 100 sentences of J.K. Rowling's *Harry Potter and the Sorcerer's Stone*, selected as a representative sample due to its ability to reflect the narrative tone, cultural nuances, and stylistic complexity of the novel. The data analyzed include the original English text, the Bahasa Indonesia translation generated by ChatGPT, and feedback from five raters. The raters were carefully selected based on their fluency in Bahasa Indonesia, certification in English language proficiency, and professional experience in fields requiring intensive use of English, such as translation and linguistics.

Data collection involved document analysis and structured questionnaires. Document analysis identified translation strategies using Mona Baker's (2018) classification, while the questionnaires assessed accuracy and acceptability on a scale of 1 to 3, with 3 representing high quality. The analysis process compared the source and target texts, categorized the strategies employed, averaged the raters' scores, and synthesized findings to evaluate the translational effectiveness and quality. Ethical considerations included informed consent from raters and transparent evaluation criteria. This methodological approach provides a comprehensive framework for understanding the strengths and limitations of ChatGPT in translating culturally and linguistically rich texts.

FINDINGS AND DISCUSSION

1. Translation strategies

From the analysis of 100 data, the translation results have been grouped into several translation strategies. The grouping of translation strategies is based on Bakers translation strategies which are divided into seven strategies. They are Translation by a More General Word, Translation by a More Neutral or Less Expressive Word, Translation by Cultural Substitution, Translation by Using a Loan Word or Loan Word Plus Explanation, Translation by Paraphrase Using a Related Word, Translation by Omission, Translation by Illustration. The table below summarizes the frequency of use of each translation strategy used by ChatGPT in translating Harry Potter and the Sorceres stone novel.

Table 1. Translation Strategies

Category	Number of Case	Frequency
Translation by Paraphrase Using a Related Word	62	62%
Translation by a More Neutral or Less Expressive Word	24	24%
Translation by a More General Word	8	8%
Translation by Cultural Substitution	3	3%
Translation by Using a Loan Word or Loan Word Plus Explanation	2	2%
Translation by Omission	1	1%
Translation by Illustration	-	-
Total	100	100%

The translation of the first hundred sentences of *Harry Potter and the Sorcerer's Stone* employed six key strategies based on Mona Baker's framework. *Translation by Paraphrase Using a Related Word* (62%) adapted idiomatic expressions like "didn't hold with" to "tidak percaya," ensuring natural flow, "craning over" to "menjulurkan leher," maintaining visual imagery, and "unDursleyish" to "sangat tidak sesuai dengan sifat keluarga Dursley," preserving characterization. *Translation by a More Neutral or Less Expressive Word* (24%) simplified emotional phrases, such as translating "thank you very much" into the neutral "terima kasih banyak," "chortled" to "tawa," reducing emotional nuance, and "put the cat out of his mind" to "mengabaikan kucing itu," ensuring clarity. *Translation by a More General Word* (8%) used broader terms like "finer" as "lebih baik," retaining a sense of superiority, and "mixing with" as "bergaul," capturing social interaction without specific nuances. *Translation by Cultural Substitution* (3%) adapted cultural references such as "You-Know-Who" to "Kau-Tahu-Siapa," preserving mystery, and "cloaks" to "jubah," reflecting uncommon garments in both cultures. *Translation by Using a Loan Word or Loan Word Plus Explanation* (2%) retained technical terms like "drills" as "bor" and descriptive terms like "tabby" as a loanword to maintain precision. Lastly, *Translation by Omission* (1%) omitted unnecessary elements, as seen in translating "The Potters" to "Potter," aligning with Indonesian norms while preserving meaning. Each strategy ensured clarity, cultural relevance, and engagement for Indonesian readers while respecting the original text's intent.

ChatGPT's heavily relies on paraphrase aligns with its primary design as a language model trained to prioritize semantic clarity and natural language flow. Paraphrase strategies allow ChatGPT to adapt idiomatic expressions, complex sentence structures, and culturally specific nuances into more accessible forms without losing the intended meaning. For example, the phrase "didn't hold with" becomes "tidak percaya,"

simplifying the idiom while retaining the core idea. Similarly, "craning over" as "menjulurkan leher" preserves the imagery necessary for reader visualization. This emphasis on paraphrase enhances readability and fluency, making the text approachable for Indonesian audiences. However, it may occasionally over-simplify or neutralize certain cultural or stylistic nuances present in the original text, which can affect the literary depth and authenticity.

The underutilization of cultural substitution and omission suggests that ChatGPT prioritizes fidelity to the source text over adaptive localization. Baker (2018) emphasizes the critical role of cultural adaptation in literary translation to ensure the text resonates with the target audience. For instance, while "You-Know-Who" was effectively localized as "Kau-Tahu-Siapa," other opportunities for cultural adaptation, such as idiomatic references, could have been better leveraged to enrich the Indonesian reader's experience. Similarly, omission, which can streamline translations by removing redundant or culturally irrelevant elements, is sparingly used. This restraint likely stems from ChatGPT's default tendency to preserve as much of the source text as possible, aiming for comprehensiveness but sometimes at the expense of naturalness.

When comparing this strategy distribution to human translators, a significant divergence emerges. Human translators often demonstrate a more balanced approach, utilizing cultural substitution and omission more liberally to align the translation with target audience expectations and cultural context. For instance, professional translators might reframe entire sentences or sections to ensure the text feels natural and engaging, even if it deviates slightly from the source text. ChatGPT's preference for paraphrase and limited use of cultural substitution or omission reflects an AI-generated translation's characteristic focus on linguistic consistency and fidelity rather than creative adaptation.

ChatGPT's paraphrase-heavy approach ensures readability and fluency, its limited engagement with cultural substitution and omission underscores an area where human translators excel: crafting translations that resonate deeply with cultural and contextual nuances. This highlights the complementary nature of AI and human translation efforts, with AI excelling in clarity and consistency, while human translators bring a nuanced understanding of cultural dynamics to their work.

These findings in line with the theoretical foundations outlined in the literature. ChatGPT's frequently use of Translation by Paraphrase Using a Related Word (62%) supports Baker's (2018) argument that this strategy is particularly effective in addressing complex phrases and idiomatic expressions in literary texts. Examples such as "didn't hold with" translated into "tidak percaya" and "craning over" rendered as "menjulurkan leher" demonstrate the model's ability to adapt meaning while maintaining contextual relevance. However, its limited use of Translation by Cultural Substitution (3%) and Translation by Omission (1%) highlights the model's struggle with culturally specific elements, which aligns with Baker's observation that such strategies require a deep understanding of both source and target cultures.

2. Translation Accuracy and Acceptability

The study evaluated the translation quality of ChatGPT's rendition of *Harry Potter and the Sorcerer's Stone* by involving five raters who assessed the accuracy and acceptability of the translations at the sentence level using a structured questionnaire. While no translations were deemed entirely inaccurate or unacceptable, a greater frequency of translations fell into the less accurate and less acceptable categories compared to those rated as accurate and acceptable. This disparity reflects the challenges of translating literary works, which often involve complex cultural nuances, specific terms, and stylistic elements that are difficult to fully capture in the target language. By focusing on sentence-level translation rather than word-for-word equivalence, the translations maintained overall context, tone, and meaning, minimizing distortion and preserving the essence of the original text.

Based on the rater's insight, the traits of Translation Accuracy and acceptability had shown in the table below

Table 2. Translation Accuracy and Acceptability

Category	Number of Case		Frequency	
	Accuracy	Acceptability	Accuracy	Acceptability
Accurate/Acceptable	48	37	47%	37%
Less Accurate/Less Acceptable	52	63	52%	63%
Inaccurate/Not Acceptable	-	-	-	-

The analysis of ChatGPT's translation accuracy and acceptability in rendering *Harry Potter and the Sorcerer's Stone* reveals mixed results. Regarding accuracy, 48% of translations were deemed accurate, while 52% were categorized as less accurate, with no translations marked as entirely inaccurate. Accurate translations preserved the source text's meaning, such as "Mr. Dursley was the director of a firm called Grunnings, which made drills" was translated as "Tuan Dursley adalah direktur dari sebuah perusahaan bernama Grunnings, yang membuat bor." This translation was rated as accurate due to its fidelity to the source text and smooth integration into the target language, "The Dursleys had a small son called Dudley" translated as "Keluarga Dursley memiliki seorang putra kecil bernama Dudley," with raters agreeing on its precision despite generalizing "finer" to "lebih baik." However, less accurate translations, like "Mr. and Mrs. Dursley, of number four, Privet Drive, were proud to say that they were perfectly normal, thank you very much," missed the tone and subtle arrogance of the original, rendering it as "Tuan dan Nyonya Dursley...dengan bangga mengatakan bahwa mereka sepenuhnya normal," "At half past eight, Mr. Dursley picked up his briefcase, pecked Mrs. Dursley on the cheek, and tried to kiss Dudley goodbye but missed, because Dudley was now having a tantrum and throwing his cereal at the walls," rendered as "Pukul setengah sembilan, Tuan Dursley mengambil tas kerjanya, mencium pipi Nyonya Dursley, dan mencoba mencium Dudley untuk mengucapkan selamat tinggal, tetapi gagal, karena Dudley kini sedang

mengamuk dan melempar serealnya ke dinding,” struggled to fully capture the vividness and chaotic imagery of the original text.

Regarding acceptability, 37% of translations were rated acceptable, while 63% were less acceptable. Acceptable translations, such as "The Dursleys had everything they wanted, but they also had a secret" rendered as "Keluarga Dursley memiliki segalanya yang mereka inginkan, tetapi mereka juga memiliki sebuah rahasia," conveyed the intended meaning naturally, "Mr. Dursley always sat with his back to the window in his office on the ninth floor" translated as "Tuan Dursley selalu duduk membelakangi jendela di kantornya di lantai sembilan" was well-received for its straightforward and clear delivery, resonating naturally in Indonesian. In contrast, less acceptable examples, such as "Mrs. Potter was Mrs. Dursley's sister...as unDursleyish as it was possible to be," translated as "saudaranya dan suaminya yang tidak berguna sangat tidak sesuai dengan sifat keluarga Dursley," were criticized for stiffness and unnatural phrasing, "Mr. Dursley blinked and stared at the cat. It stared back," rendered as "Tuan Dursley berkedip dan menatap kucing itu. Kucing itu menatap balik," were criticized for stiffness and a lack of fluency, making the translation feel less engaging. These results underscore the difficulty of maintaining the balance between preserving meaning and achieving natural fluency in literary translations.

In terms of quality, the study's findings reflect the challenges of balancing accuracy and acceptability in literary translation. Using Nababan et al.'s (2012) framework, while 48% of translations were rated accurate, only 37% achieved high acceptability, indicating issues with naturalness and fluency in Indonesian. These results echo prior studies by Sudarmaji et al. (2023) and Ruhmadi and Al Farisi (2023), which reported similar limitations in machine translation systems, particularly in complex linguistic contexts. Moreover, the findings align with Castilho's (2023) insights on AI translation struggles with emotional and cultural depth, despite advancements in neural machine translation (Bahdanau et al. (2015). This underscores the need for further refinement in AI models to handle the creative and cultural complexities of literary works effectively.

CONCLUSION

This study analyzed the translation techniques employed by ChatGPT and evaluated the quality of its translations in terms of accuracy and acceptability, using the first 100 sentences of *Harry Potter and the Sorcerer's Stone* as the research site. The findings demonstrate that ChatGPT effectively employs techniques such as Translation by a More General Word, Translation by Paraphrase Using a Related Word, and Translation by a More Neutral or Less Expressive Word to convey the core meaning of the source text. However, challenges were evident in handling cultural nuances, idiomatic expressions, and informal language. While ChatGPT achieves a notable degree of accuracy, occasional unnatural sentence structures impact the acceptability of its translations, particularly in stylistically rich and culturally specific contexts.

This study contributes by identifying specific gaps in ChatGPT's ability to adapt cultural nuances and stylistic elements, which are critical in literary translation. This

highlights the importance of human intervention in ensuring translations are contextually and stylistically appropriate, particularly for culturally rich or idiomatic texts. Moreover, the analysis underscores ChatGPT's potential as a valuable tool for translators, provided it is used in tandem with post-editing to address its limitations. This study has several limitations, including the small sample size of 100 sentences and the focus on a single text. These constraints limit the generalizability of the findings. Future research is encouraged to test ChatGPT's capabilities on longer, more complex texts, compare its effectiveness with other AI translation tools, and explore how updates to its algorithms affect performance. Additionally, studies could investigate the reception of AI-translated texts by target audiences to further understand their impact. Based on the findings, Translators should consider integrating ChatGPT as a supportive tool, utilizing its strengths in semantic clarity and efficiency while relying on post-editing to refine cultural and stylistic appropriateness. For AI developers, integrating cultural sensitivity training and context-awareness into AI models is essential to enhance their performance in translating nuanced, literary, and culturally rich texts. By addressing these areas, AI tools like ChatGPT can better complement human translators and meet the growing demand for high-quality translations in diverse linguistic and cultural settings.

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