

Analysis of The Translation Results of The German Language Education Study Program Website Article Using ChatGPT

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ABSTRACT

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The rapid development of internet technology has impacted various fields, including language translation. Translation is a complex process that not only transfers messages from the source language to the target language but also considers contextual structure and meaning to avoid errors. With technological advancements, automatic translation tools such as Google Translate, Bing Translator, and DeepL have simplified the translation process. However, the quality of translations produced by these tools, especially for languages with complex structures like German, is often inaccurate. Recently, ChatGPT, an artificial intelligence model developed by OpenAI, has emerged as an alternative for generating more natural and contextual translations. This study focuses on analyzing the translation accuracy of Indonesian to German texts produced by ChatGPT on the academic website content of the German Language Education Program at Universitas Negeri Surabaya. The aim of this research is to evaluate the quality, fluency, and contextual accuracy of the translations, and to assess how well ChatGPT handles the complex grammatical structures of the German language.

INTRODUCTION

The rapid development of internet technology has influenced various aspects of life, including the field of language translation. According to Newmark (1988), translation is the activity of rendering the meaning of a text into another language as intended by the author. Newmark's concept of translation emphasizes that translation is not merely transferring messages from the source language to the target language but requires a deep understanding of both the target language and the intended meaning to avoid errors.

Document or text translation from one language to another traditionally requires the direct involvement of human translators who are proficient in both languages. However, with technological advancements today, various automatic translation tools have emerged that facilitate faster and more practical translation processes. Common automatic translation technologies used today include Google Translate, Bing Translator, and DeepL. One of the most popular translation tools is Google Translate, which uses Machine Translation to translate large amounts of text and offers translations in over 100 languages. However, translations using Google Translate are not always accurate. The accuracy of Google Translate often leads to confusion regarding grammar, word choice, and spelling (Arifatun, 2012), particularly for languages with complex structures like German. Tabinda's (2021) study also found that Google Translate has limitations, leading to translations that deviate from the grammatical structure of the target language. Although it can help readers grasp the general meaning of a foreign language text, the resulting translations are not always accurate.

According to Bettman (2013:221), the quality of translation is crucial in any translation process and must not be overlooked in order to produce translations suitable for

publication. In an academic context, the need for precise and accurate translation becomes even more important, particularly when it involves study program websites that disseminate essential information to prospective students and the public. One study program that requires special attention in translation is the German Language Education Study Program at Universitas Negeri Surabaya. Considering the complexity of the German language, which differs from Indonesian, the quality of automatic translations often poses its own challenges. Inaccurate translations can have significant negative implications for the institution's image.

With recent developments in Artificial Intelligence (AI)-based translation models, new opportunities have emerged to address the limitations of existing machine translators. One such tool is ChatGPT, which offers an alternative approach to the translation process. Unlike previous translation tools, ChatGPT, developed by OpenAI, is an advanced natural language processing model capable of understanding context more thoroughly, producing more contextual and natural translations. ChatGPT can be accessed via the web at <https://chat.openai.com/chat> using a chat-based method (Ruhmadi & Al Farisi, 2023). ChatGPT offers speed and efficiency in processing data and generating articles, significantly accelerating the writing process and reducing time. Moreover, ChatGPT can identify synonyms to ensure the appropriate use of grammar and vocabulary in the resulting articles. With its strong text analysis capabilities, ChatGPT has the potential to deliver high-quality translations, even for languages with complex structures such as German.

This research focuses on analyzing the accuracy of article translations on the academic website of the German Language Education Study Program using ChatGPT. This study aims to evaluate the accuracy of translations from Indonesian to German produced by ChatGPT, assessing the quality, fluency, and contextual accuracy of the translations, with particular attention to how well the system handles the complex grammatical structures of the German language.

THEORETICAL REVIEW

Translation

There are various ways to define translation or the act of translating. According to the Kamus Besar Bahasa Indonesia (Indonesian Dictionary), denotatively, the word "translation" comes from the term "terjemah," which means copying or transferring one language into another; translating. The word "terjemahan" has two meanings: 1) a copy of a language or a language transfer, and 2) the result of the translation process. Additionally, "terjemah" can also be understood as "penerjemahan," which refers to the process, method, or action of translating.

According to Bell (1991), "Translation is the expression in another language (or target language) of what has been expressed in another source language, preserving semantic, and stylistic equivalences." Translation is thus a form of expressing a language in another language, with attention to semantic and equivalence. Similarly, Larson (1978) argues that translation involves transferring meaning from the source language to the target

language, considering the semantic structure of the source language, with meaning being the key element that must be well transferred.

Based on these definitions, it can be concluded that translation, in general, is the process of transferring ideas, concepts, or thoughts from one language (known as the source language) into another language (referred to as the target language or recipient language).

ChatGPT

ChatGPT stands for Chat Generative Pre-Trained Transformer, a chatbot that uses artificial intelligence (AI) to automatically send text messages to users. In the context of translation, ChatGPT demonstrates its advantages through its speed and efficiency in processing data and translating texts quickly, thereby accelerating the translation process and reducing the time needed (Hakiki et al., 2023). Based on this, it can be concluded that ChatGPT can be a highly beneficial tool in the field of translation, helping to produce translations quickly and efficiently.

LITERATURE REVIEW

Several previous studies are relevant to this research on translation. One such study was conducted by Hakiki et al. in 2023, titled "Analysis of Translation Results from Google Translate and ChatGPT: A Comparative Study of Arabic to Indonesian Translation." This study compared translation results using ChatGPT and Google Translate. It found that Google Translate was considered less accurate and unable to convey meaning effectively, as word choice and diction did not align with the target language. Additionally, the grammatical structure of the target language was not well reflected in the translations. In contrast, translation using ChatGPT was deemed more accurate, as it managed to convey meaning without deviating from the context. The similarity between this study and the current research lies in the assessment of translation results using ChatGPT. The key difference is that the current study focuses exclusively on ChatGPT as a translation tool. Another relevant study was conducted by Citra in 2021, titled "The Issues of Translating Arabic to Indonesian Using Google Translate." This research found that while Google Translate offers convenience, it still has limitations in terms of linguistic rules, particularly in morphology, semantics, and syntax.

Based on these prior studies, it is evident that translation tools like Google Translate are still unable to consistently produce accurate translations, and the results can impact the meaning of the text. In light of this, the researcher intends to analyze ChatGPT as an alternative translation tool for comparison.

RESEARCH METHOD

This research employs a qualitative descriptive approach. A qualitative descriptive approach aims to present data as it is, describing events or data through explanatory sentences using qualitative methods. The object of this research is an article found on the German Language Education website at Universitas Negeri Surabaya. The data is taken from an article titled "Visit of the German Ambassador to the Faculty of Language and

Arts at UNESA.” This research uses qualitative methods. The data and analysis for this study are derived from the documented translation results produced by the ChatGPT Translation Tool and the original text.

RESULTS AND DISCUSSION

The following is the original text of the study program website article and a translation into German using ChatGPT:

Original Text (Bahasa Indonesia)	Text translation into German using ChatGPT
<p><i>Pada 19 September 2024, Fakultas Bahasa dan Seni Universitas Negeri Surabaya (FBS Unesa) menerima kunjungan dari Duta Besar Negara Federal Jerman, Ina Lepel, didampingi Konsul Kehormatan Jerman, Christopher Tjokrosetio. Acara berlangsung di ruang sidang FBS T14 dan dihadiri oleh Dekan FBS, Bapak Syafi'ul Anam, Ph.D., serta dosen Program Studi Pendidikan Bahasa Jerman dan Sastra Jerman.</i></p> <p><i>Kunjungan ini menjadi momen penting, menandai kunjungan pertama Dubes Jerman ke Unesa, dengan tujuan memperkuat kerja sama dengan institusi pendidikan dan budaya Jerman. Ina Lepel mengapresiasi kontribusi Unesa dalam pengajaran bahasa dan budaya Jerman di Indonesia.</i></p> <p><i>Acara dibuka oleh Ibu Kanya Catya, S.T., M.A., dilanjutkan sambutan dari Dekan dan Duta Besar. Sesi tanya jawab interaktif memberikan kesempatan bagi Dekan dan dosen untuk berdiskusi langsung dengan Dubes dan Konsul. Dalam diskusi ini, mereka membahas berbagai inisiatif dan program kolaboratif yang dapat dilakukan bersama, serta caracara untuk meningkatkan kualitas pengajaran bahasa Jerman. Diskusi ini menciptakan suasana yang konstruktif dan produktif, di mana kedua belah pihak dapat saling bertukar ide dan memperkuat kemitraan yang ada.</i></p>	<p>Am 19. September 2024 empfing die Fakultät für Sprachen und Künste der Staatlichen Universität Surabaya (FBS Unesa) einen Besuch der Botschafterin der Bundesrepublik Deutschland, Ina Lepel, begleitet vom deutschen Honorarkonsul Christopher Tjokrosetio. Die Veranstaltung fand im Sitzungssaal der FBS T14 statt und wurde vom Dekan der FBS, Herrn Syafi'ul Anam, Ph.D., sowie von Dozenten des Studiengangs Deutschlehrausbildung und Germanistik besucht.</p> <p>Dieser Besuch war ein bedeutender Moment, da es der erste Besuch der deutschen Botschafterin an der Unesa war. Ziel war es, die Zusammenarbeit mit deutschen Bildungs- und Kultureinrichtungen zu stärken. Ina Lepel lobte den Beitrag der Unesa zur Lehre der deutschen Sprache und Kultur in Indonesien.</p> <p>Die Veranstaltung wurde von Frau Kanya Catya, S.T., M.A., eröffnet, gefolgt von Begrüßungsreden des Dekans und der Botschafterin. Eine interaktive Fragerunde bot dem Dekan und den Dozenten die Möglichkeit, sich direkt mit der</p>

<p><i>Kunjungan ini diakhiri dengan pertemuan singkat antara Dubes dan mahasiswa. Kunjungan ini menekankan pentingnya kolaborasi di masa depan. Dengan semangat dan komitmen yang tinggi, kunjungan ini juga diharapkan dapat memperluas jaringan kerja sama internasional dan memperkuat peran Unesa dalam pendidikan bahasa Jerman.</i></p>	<p>Botschafterin und dem Konsul auszutauschen. In dieser Diskussion wurden verschiedene Initiativen und gemeinsame Programme erörtert, ebenso wie Wege zur Verbesserung der Qualität des Deutschunterrichts. Die Diskussion schuf eine konstruktive und produktive Atmosphäre, in der beide Seiten Ideen austauschen und die bestehende Partnerschaft stärken konnten.</p> <p>Der Besuch endete mit einem kurzen Treffen zwischen der Botschafterin und den Studierenden. Dieser Besuch unterstrich die Bedeutung zukünftiger Zusammenarbeit. Mit großem Engagement und hoher Motivation wird erwartet, dass der Besuch auch zur Erweiterung internationaler Kooperationsnetzwerke beiträgt und die Rolle der Unesa im Bereich der Deutschlehre stärkt.</p>
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In this study, the translation of an article from the website of the German Language Education Study Program at Universitas Negeri Surabaya (UNESA) using ChatGPT was analyzed to evaluate its quality and suitability in translating into German. Overall, ChatGPT produced translations that were quite good and contextual, particularly in handling complex sentence structures and vocabulary from Indonesian to German.

The equivalence of translation in this study is defined as the level of accuracy and readability of ChatGPT's results compared to the original text in Indonesian. The analysis was conducted by examining lexical, syntactic, and semantic equivalence.

Analysis of Translation Equivalence

1. Lexical Equivalence

The translation above generally maintains good lexical equivalence between the source text (Indonesian) and the target text (German). For example:

- a. *"Fakultas Bahasa dan Seni"* is translated as *"Fakultät für Sprache und Kunst,"* which is less accurate. The appropriate translation should be *"Fakultät für Sprachen und Künste,"* as the translation should also align with the general terminology used.
- b. *"Duta Besar"* is translated as *"Botschafterin,"* which is an appropriate equivalent. In Indonesian, there is only one term for "ambassador," while in German, there are two terms differentiated by gender.

- c. However, there are some adjustments in vocabulary to fit the cultural context of Germany. For instance:
- d. "*Sesi tanya jawab interaktif*" is translated as "*interaktive Fragerunde*," which is a more commonly used phrase in German.
- e. "*Ina Lepel mengapresiasi kontribusi Unesa...*" is translated as "*Ina Lepel würdigte den Beitrag der Unesa...*," which preserves the core meaning of appreciation.

2. Syntactic Equivalence

In terms of syntax, this translation demonstrates good equivalence. German often uses longer and more formal sentence structures; however, in this translation, the structure of Indonesian sentences is well preserved. Additionally, passive sentences in Indonesian often become active sentences in German. For example:

- a. A complex sentence in Indonesian like "*Kunjungan ini menjadi momen penting, menandai kunjungan pertama Dubes Jerman ke Unesa, dengan tujuan memperkuat kerja sama...*" is translated into a compound sentence in German with a similar structure: "*Dieser Besuch markierte einen wichtigen Moment, da es der erste Besuch der deutschen Botschafterin an der Unesa war, mit dem Ziel, die Zusammenarbeit...*". The use of conjunctions such as "*mit dem Ziel*" and "*da es der erste Besuch war*" adheres to German syntactic patterns while maintaining the original meaning.
- b. In German, the following sentence is in passive voice: "*In dieser Diskussion wurden verschiedene Initiativen und gemeinsame Programme erörtert, ebenso wie Wege zur Verbesserung der Qualität des Deutschunterrichts*". When translated into Indonesian, it becomes the active sentence: "*Dalam diskusi ini, mereka membahas berbagai inisiatif dan program kolaboratif yang dapat dilakukan bersama, serta cara-cara untuk meningkatkan kualitas pengajaran bahasa Jerman*".

There are also minor adjustments in word order to follow German grammar, such as placing the verb at the end of subordinate clauses (e.g., "*da es der erste Besuch war*").

3. Semantic Equivalence

Semantically, the translation successfully preserves the meaning of the source text. The core meaning of each sentence remains intact without significant alterations, although there are a few sentences that require minor adjustments. For example:

- a. "*Pendidikan Bahasa Jerman*" should be translated as "*Deutsch als Fremdsprache*" (German as a Foreign Language), which is a more accurate term in the German education context.
- b. "*Diskusi ini menciptakan suasana yang konstruktif dan produktif*" is translated as "*Der Dialog schuf eine konstruktive und produktive Atmosphäre*," which maintains the meaning of the discussion appropriately in a semantic sense. There is no significant shift in meaning. There are only minor adjustments made to ensure the text sounds more natural in the German context. For instance, "*memperluas jaringan kerja sama internasional*" is translated as "*das internationale Netzwerk erweitert*," which is a more commonly used phrase in international discussions.

In conclusion, the translation demonstrates strong equivalence in terms of lexical, syntactic, and semantic aspects. While some adjustments were made in word choice and

sentence structure, the overall meaning of the source text has been accurately and effectively preserved in the target text.

CONCLUSION

The results of this study indicate that ChatGPT is capable of providing fairly good translations of academic articles from Indonesian to German in terms of lexical, syntactic, and semantic aspects. However, there are still some weaknesses in the use of specific terms and sentence structures that require manual revision. Therefore, although ChatGPT can expedite the translation process, human intervention remains necessary to ensure optimal translation quality, particularly in academic and professional contexts that demand high accuracy.

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