The Effectiveness of Artificial Intelligence Usage as Translation Medium among English Literature Student of UIN Sunan Gunung Djati Bandung

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Abstract: The integration of Artificial Intelligence (AI) in translation services has transformed the landscape of linguistic studies. This study assesses the effectiveness of AI-driven translation tools among English Literature students at UIN Sunan Gunung Djati Bandung, focusing on translation accuracy, usability, and impact on language learning. Using a mixed-methods approach, the research collected quantitative data through questionnaires and supported it with a literature review. Findings indicate that 96.6% of students regularly use AI translation tools, with a majority finding them helpful. However, concerns about over-reliance on these tools and their potential negative impact on language skill development were noted. The study highlights the dual role of AI tools in enhancing learning while requiring human oversight for accuracy and contextual relevance. Recommendations for improving AI tools include ensuring contextually accurate translations, enhancing vocabulary databases, and integrating human input. Overall, while AI translation tools significantly aid students' academic activities, a balanced approach is crucial to avoid dependency and ensure the development of independent language skills

Keywords: Artificial Intelligence, translation tools, English Literature students, language learning, AI effectiveness

INTRODUCTION

The advent of Artificial Intelligence (AI) has transformed numerous sectors, including translation services (Okunlaya et al., 2022). The application of AI in translation, especially through machine translation (MT) systems, has become a focal point in linguistic, computer science, and cognitive science research. AI-driven translation tools, such as Google Translate, Baidu Translate, Microsoft Translate, and Youdao Translate, have gained widespread use due to their efficiency and accessibility (Xiao, 2021). This paper aims to evaluate the effectiveness of AI as a translation medium among English Literature students at UIN Sunan Gunung Djati Bandung, focusing on their translation accuracy, usability, and overall impact on language learning.

The study by (Daems, 2016) leverages insights from existing research on the comparative quality of human and machine translations. ePrevious assessments indicate that while AI-based translation systems have made significant strides, human translators still maintain a qualitative edge in certain aspects, particularly in handling nuanced and context-dependent language. This research builds on these findings by exploring the specific context of English Literature students, whose needs and expectations from translation tools may differ from general users.

Machine translation has evolved from rule-based systems to statistical methods, and most recently to neural machine translation (NMT) systems, which have shown substantial improvements in handling complex grammatical structures and idiomatic expressions (Wang et al., 2022). These advancements have made MT systems more reliable for a broader range of applications, yet challenges remain in achieving the level of sophistication and subtlety inherent in human translation. This duality—of AI augmenting human capabilities while also presenting limitations—frames the central inquiry of this study.

In the realm of education, particularly in language studies, the integration of AI tools can have profound implications. For English Literature students, who engage deeply with textual analysis and interpretation, the accuracy and reliability of translation tools are paramount (Hidalgo-Terner, 2020). This study evaluates whether AI-based translation tools can support or enhance their academic activities, such as translating literary texts, understanding complex literary theories, and engaging with scholarly works in different languages.

The research methodology involves a detailed assessment of translation outputs from both AI tools and human translators. The evaluation criteria include grammatical accuracy, contextual relevance, and literary appropriateness, reflecting the specific needs of English Literature students. Additionally, the study considers user feedback on the usability and educational impact of these tools, providing a holistic view of their effectiveness in an academic setting.

By comparing AI translations with human translations, this study also aims to highlight areas where AI excels and where it falls short. For instance, while NMT systems have shown improvements in processing complex grammatical structures and maintaining lexical accuracy, they often struggle with the creative and interpretative aspects of literary translation (Wei, 2022). This comparative analysis will offer valuable insights into the potential and limitations of AI in the context of literary studies.

Furthermore, the study situates its findings within the broader discourse on AI and education. According to a study by Chen et al. (2020), the integration of AI in educational tools is not without controversy; concerns about the potential displacement of human skills and the ethical implications of

reliance on machine-generated content are prevalent. This research contributes to this discourse by providing empirical evidence on the practical benefits and challenges of using AI-based translation tools in higher education.

This study aims to provide a comprehensive evaluation of the effectiveness of AI as a translation medium among English Literature students at UIN Sunan Gunung Djati Bandung. By examining both the technical capabilities of AI translation tools and their practical impact on students' academic activities, the research offers a nuanced understanding of the role of AI in modern education. The findings will not only inform the academic community but also contribute to the ongoing development and refinement of AI-based educational tools.

RESEARCH METHOD
Research Design

This study employs a quantitative descriptive research design to investigate the usage, effectiveness, and impact of AI-based translation tools among English Literature students. The primary data collection method is a structured questionnaire, which will gather quantitative data on students' experiences and perceptions of AI-based translation tools (Sidel et al., 2018).

Population and Sample

The population for this study includes undergraduate students majoring in English Literature at UIN Sunan Gunung Djati Bandung. A sample of 30 students will be selected using stratified random sampling to ensure representation across different academic years and courses (Alvi, 2016).

Data Collection

Data will be collected using a self-administered questionnaire designed to capture various aspects of the students' use of AI-based translation tools. The questionnaire will be distributed online through Google Form to ensure broad reach and convenience for the respondents (Aithal & Aithal, 2020).

Questionnaire Design

The questionnaire will cover the following areas:
- Frequency of Use:
  How often do you use Artificial Intelligence-based translation tools (such as Google Translate, DeepL, etc.)?
- Primary Purpose:
  The main reason you use an Artificial Intelligence-based translation tool is to?
- Correction of Translations:
  How often do you need to correct translations provided by artificial intelligence translation tools?
- Satisfaction with Translation Results:
  How satisfied are you with the translation results provided by the Artificial Intelligence-based translation tool?
- Perceived Accuracy:
  How accurate do you think the translations produced by Artificial Intelligence-based translation tools are?
- Assistance in Understanding Lecture Material:

How much did the Artificial Intelligence-based translation tool help you understand the lecture material?
- Impact on English Skills:
  Has the use of Artificial Intelligence-based translation tools improved your English skills?
- Dependence on AI-based Tools:
  Do you feel dependent on AI-based translation tools to complete your tasks?
- Suggestions for Improvement:
  What are your suggestions to improve the effectiveness of using Artificial Intelligence-based translation tools among students?
- Experiences and Obstacles:
  Do you have any interesting experiences or obstacles you've encountered when using artificial intelligence-based translation tools?

Data Analysis

Quantitative data obtained from the questionnaire will be analyzed using descriptive statistics, including frequencies and percentages These analyses will provide insights into the patterns of usage, satisfaction levels, perceived accuracy, and impact of AI-based translation tools on students' learning experiences (Sheard, 2018). The Excel Worksheet software will be used for data analysis.

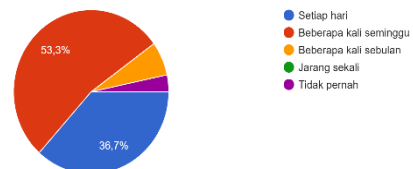## RESULT AND DISCUSSION
Frequency of AI Tool Usage

Chart 1. How often do you use Artificial Intelligence-based translation tools (such as Google Translate, DeepL, etc.)?

The usage frequency of AI translation tools among English Literature students at UIN Sunan Gunung Djati Bandung reveals a high dependency on these tools. The survey data shows that:
- 36,7% of students use AI translation tools daily.
- 53,3% use them several times a week.
- 6,7% use them several times a month.
- 3.3% reported never using these tools.

This indicates that a significant majority (86.6%) of the students rely on AI translation tools regularly, either daily or multiple times a week. The high frequency of usage highlights the crucial role these tools play in their academic routine, potentially due to the convenience and speed they offer in translating texts. This finding aligns with broader trends in translation technology adoption, where increased reliance on AI tools has been observed across various fields, including

medical and general translation, due to their efficiency and productivity benefits.

Perceived Helpfulness

1. Seberapa puas Anda dengan hasil terjemahan yang diberikan oleh alat penerjemah berbasis Artificial Intelligence?
30 jawaban

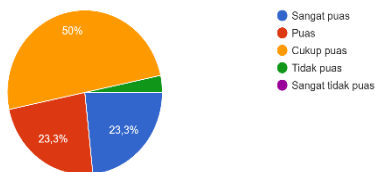*Sangat puas / Puas / Cukup puas / Tidak puas / Sangat tidak puas*

Chart 2. How satisfied are you with the translation results provided by the Artificial Intelligence-based translation tool?

Students were also asked to rate the helpfulness of AI translation tools in understanding their course materials:
- 50% found the tools very helpful.
- 23,3% found them helpful.
- 23,3% found them somewhat helpful.
- 3,3% of the students reported the tools as not helpful.

These results indicate a positive reception towards AI translation tools, with the majority of students finding them beneficial. The lack of negative feedback underscores the perceived effectiveness of these tools in aiding comprehension and learning. This sentiment is supported by research in medical translation, where AI tools have been praised for their ability to increase speed and productivity, especially when combined with human expertise to ensure accuracy and contextual relevance (Sounderajah et al., 2020).

Impact on English Proficiency

2. Apakah penggunaan alat penerjemah berbasis Artificial Intelligence meningkatkan kemampuan bahasa Inggris Anda?
30 jawaban

Sangat meningkatkan / Meningkatkan / Cukup meningkatkan / Tidak meningkatkan / Mengurangi kemampuan
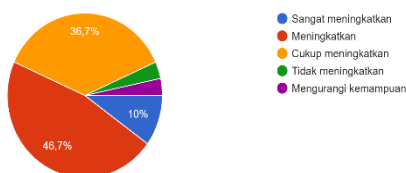
Chart 3. Has the use of Artificial Intelligence-based translation tools improved your English skills?

The survey also explored the impact of AI translation tools on students' English proficiency
- 46,7% reported a moderate improvement in their language skills.
- 10% felt their proficiency increased significantly.
- 36,7% noticed a slight improvement.
- 3.3% felt their skills were not improved.
- 3.3% felt their skills were de-improved

The data suggests that while most students experienced some level of improvement in their English proficiency due to the use of AI translation tools, there is a spectrum of perceived benefits. The significant and moderate improvements reported by a substantial portion of students (56.7%) indicate that these tools can positively influence language learning. However, the concern about potential over-reliance on AI tools and its negative impact on language skills development is noteworthy. This echo concerns in professional translation domains, where overconfidence in AI-generated translations without proper human oversight can lead to errors and a false sense of proficiency.

Dependency on AI Tools

3. Apakah Anda merasa ketergantungan pada alat penerjemah berbasis Artificial Intellegence dalam menyelesaikan tugas-tugas Anda?
30 jawaban

Sangat tergantung / Tergantung / Cukup tergantung / Tidak tergantung / Sangat tidak tergantung
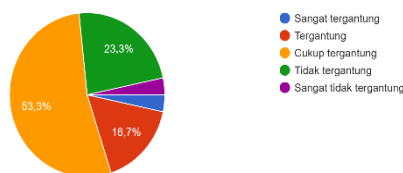
Chart 4. Do you feel dependent on AI-based translation tools to complete your tasks?

When asked about their dependency on AI translation tools for completing assignments:
- 16.7% reported moderate dependency.
- 53.3% were somewhat dependent.
- 3,3% were highly dependent.
- 23,3% reported no dependency.
- 3,3% reported very not dependent.

This indicates that a considerable number of students depend on AI tools to some extent, with a smaller portion expressing high dependency. The reliance on these tools is significant, but there remains a segment of students who use them judiciously. This finding is crucial as it reflects the balance between leveraging AI tools for efficiency and maintaining the development of independent language skills. The experience in medical translation similarly highlights the need for a balanced approach where AI aids productivity but does not replace the critical role of human translators in ensuring accuracy and contextual appropriateness (Moneus & Sahari, 2024).

Accuracy of AI Translation Tools

2. Menurut Anda, seberapa akurat hasil terjemahan yang dihasilkan oleh alat penerjemah berbasis Artificial Intelligence?
30 jawaban

Sangat akurat / Akurat / Cukup akurat / Tidak akurat / Sangat tidak akurat
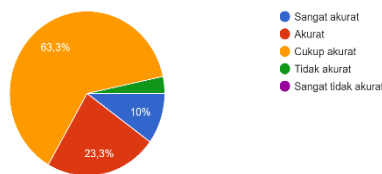
Chart 5. In your opinion, how accurate are the translation results produced by Artificial Intelligence-based translation tools?

The accuracy of AI translation tools, as perceived by the English Literature students at UIN Sunan Gunung Djati Bandung, was a significant aspect explored in the questionnaire. The students were asked to rate the accuracy of translations provided by AI tools. Here is a summary of their responses:

- **Highly Accurate**: 3 students (10%) reported that AI translations were highly accurate.
- **Moderately Accurate**: 7 students (23.3%) found the translations moderately accurate.
- **Somewhat Accurate**: 19 students (63,3%) felt the translations were somewhat accurate.
- **Inaccurate**: 1 student (3.3%) reported that the translations were inaccurate.

The data reveals that the majority of students (33,3%) found AI translations to be either highly or moderately accurate. This positive perception of accuracy is crucial as it directly impacts the usefulness and reliability of AI tools in academic settings (Johnson et al., 2023). Students depend on these tools to understand complex texts, and the high accuracy rates help in maintaining trust in the technology. However, the presence of students who rated the translations as only somewhat accurate or inaccurate (66,6%) indicates that there are still challenges to be addressed.

Suggestions for Improvement

Students provided several suggestions to enhance the effectiveness of AI translation tools:

1. Ensuring accurate and contextually relevant translations.
2. Cross-checking AI translations with human input.
3. Enhancing vocabulary and idiomatic expressions in AI tools.
4. Providing free or more affordable access to premium AI tools.

These suggestions emphasize the need for continuous improvement in AI translation technology, particularly in terms of accuracy and contextual understanding. The importance of human oversight is reiterated, which is a common theme in professional translation practices where AI tools are seen as aids rather than replacements for human expertise (Zhang et al., 2021).

Challenges and Interesting Experiences

Students also shared their challenges and experiences with AI translation tools, including:

- Literal and unnatural translations.
- Errors in translating idiomatic expressions.
- Occasionally incorrect or nonsensical outputs.

On the positive side, some students noted that AI tools provided alternative phrases and vocabulary options, enriching their understanding of the material. These experiences reflect the dual nature of AI translation tools: while they can enhance learning by offering new linguistic insights, they also have limitations that necessitate careful revision and human intervention. This mirrors findings in medical translation, where AI tools are valuable for their speed and consistency but require human expertise to ensure accuracy and contextual relevance (Wang et al., 2015).

Discussion

The finding from the questionnaire indicates a high level of engagement with AI translation tools among English Literature students at UIN Sunan Gunung Djati Bandung. The frequent use and generally positive perceptions of these tools underline their importance in students' academic lives. However, the reliance on these tools raises concerns about the potential for over-reliance, which could hinder the development of independent language skills (Wang & Jhang, 2023).

In a broader context, the use of AI translation tools in academic and professional settings highlights both the benefits and challenges associated with this technology. In medical translation, for example, AI tools have been shown to increase productivity and standardise terminology, which is crucial in fields that require precise and consistent language use (Kim et al., 2024).

However, the risks of overconfidence and the need for human oversight remain significant concerns. These tools are best seen as tools that enhance human expertise, but do not replace it (Wang et al., 2023). Suggestions for improvement and reported challenges point to the need for continued development and refinement of AI translation tools. Ensuring accurate and contextually appropriate translations, integrating human input, and making premium tools more accessible are critical steps in maximising the benefits of AI in translation while mitigating its limitations (Baidoo-Anu & Ansah, 2023). Overall, the study highlights the transformative impact of AI translation tools on students' learning experiences and language skills. However, it also calls for a balanced approach that harnesses the strengths of AI while encouraging the development of independent language skills. This balanced perspective is crucial for both academic success and professional competence in translation. The effectiveness of AI translation tools among English Literature students at UIN Sunan Gunung Djati Bandung is evident in their widespread use and positive reception.

CONCLUSION

The study on the use of AI translation tools among English Literature students at UIN Sunan Gunung Djati Bandung provides a comprehensive understanding of their frequency, perceived helpfulness, impact on English proficiency, dependency, and overall effectiveness. The findings indicate a high level of engagement, with 86.6% of students using AI translation tools regularly. Most students find these tools beneficial, with 50% rating them as very helpful, reflecting their importance in academic activities for convenience and speed. However, while 46.7% reported moderate improvement in English proficiency, concerns about potential over-reliance on these tools were noted, which might hinder independent language skill development.

In broader contexts, AI translation tools bring both benefits and challenges to academic and professional settings. In medical translation, AI tools enhance productivity and standardize terminology, but human oversight remains crucial to ensure accuracy and contextual relevance. This dual impact is evident in the study's findings, where students reported varied levels of dependency on AI tools, with 53.3% expressing moderate dependency. The perceived accuracy of AI

translations shows that while they are generally helpful, there are still challenges, as only a small fraction of students found them highly accurate. These findings align with other research emphasizing the need for continuous improvement in AI technology and the importance of human expertise in translation.

The study's implications highlight the necessity for a balanced approach to using AI translation tools. While these tools offer significant benefits in terms of efficiency and comprehension, the potential drawbacks, such as over-reliance, must be carefully managed. Students suggested enhancing the accuracy and contextual relevance of translations, integrating human input, and making premium tools more accessible. These suggestions underscore the ongoing need for refining AI technologies to better meet user needs. Overall, the study calls for leveraging the strengths of AI while fostering independent language skills, crucial for academic success and professional competency in translation

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