# THE COMPARISON OF TRANSLATIONS PRODUCT USING CHAT GPT AND GOOGLE TRANSLATE IN TRANSLATING SCIENTIFIC JOURNAL

# **THESIS**

This Thesis Is Submitted to fulfill the requirement for "Sarjana"

Degree in English Tadris Study Program



Written By:

HABIB HAKIM NIM.20551023

ENGLISH TADRIS STUDY PROGRAM

FACULTY OF TARBIYAH

STATE ISLAMIC INSTITUTES OF CURUP



# KEMENTERIAN AGAMA REPUBLIK INDONESIA INSTITUT AGAMA ISLAM NEGERI (IAIN) CURUP FAKULTAS TARBIYAH

Jl. Dr. AK Gani No. 01 PO 108 Telp. (0732) 21010-21759 Fax 21010 Kode Pos 39119 Homepage: http://www.iaincurup.ac.id Email: admin@iaincurup.ac.id

APPROVAL Nomor: 1572 /In.34/F.TAR/I/PP.00.9/ /2024

Name NIM

: Habib Hakim

: 20551023

Faculty

: Tarbiyah

Department Title

: English Tadris Study Program

: The Comparison of Translations Product Using Chat GPT And

Google Translate in Translating Scientific Journal

Had Examined by examining board of English Tadris Study Program of Institut Agama Islam Negeri (IAIN) Curup, on:

Day/Date

: Tuesday, July 9th 2024 : 13.30-15.00 AM

Time At

: Room 02 of The Department of English Tadris Study Program

Had been received to fulfill the requirement for the degree of Strata I in English Tadris Study Program of Tarbiyah Faculty IAIN Curup.

Examiners,

Curup, July 2024

Secretary

Dr. Sakut Anshori,S.Pd.I,M.Hum. NIP. 198110202006041002

Head,

Meli Fauziah, M.Pd. NIP. 199405232020122003

Examiner L

Dr. Leffy Novtyenti, M.Pd. NIP. 197611062003122004 Examiner II,

NIP. 198106072023211011

Dean

A LA Faculty of Tarbiyah

Dr. Sutarto, S.Ag., M.Pd NIP. 19740921 200003 1 003

A IN HE

Hal: Pengajuan Skripsi

Kepada Yth.

Ibu. Ka. Program Studi Tadris Bahasa Inggris IAIN Curup

Di tempat,

Assalamu'alaikum warahmatullahiwabarakatuh

Setelah melakukan pemeriksaan dan perbaikan seperlunya, maka kami berpendapat bahwa skripsi saudara Habib Hakim mahasiswa IAIN Curup yang berjudul "THE COMPARISON OF TRANSLATIONS PRODUCT USING CHAT GPT AND GOOGLE TRANSLATE IN TRANSLATING SCIENTIFIC JOURNAL" sudah dapat diajukan dalam sidang Munaqasyah Institut Agama Islam Negri Curup.

Demikian Permohonan ini kami ajukan. Terima kasih.

Wassalamu'alaikum Warahmatullahiwabarakatuh

Pembimbing I

Dr. Sakut Anshori, S.Pd.I M.Hum. NIP. 198110202006041002

Curup,

Juli 2024

Pembimbing I

Meli Fauziah, M.Pd NIP.199405232020122003

# THE STATEMENT OF OWNERSHIP

The researcher sign below:

Name

: Habib Hakim

NIM

: 20551023

Faculty

: Tarbiyah

Study Program

: English Tadris Study Program

State that the thesis with the title "THE COMPARISON OF TRANSLATIONS PRODUCT USING CHAT GPT AND GOOGLE TRANSLATE IN TRANSLATING SCIENTIFIC JOURNAL". This statement is made truthfully, if in the future there is a mistake in this statement, the writer is willing to accept punishment or criticism from IAIN Curup in accordance with applicable regulation.

Curup,

July

2024

The Researcher

NITM 2000102

**PREFACE** 

First, praise and gratitude to Allah SWT who has given his mercy to

researchers to complete this thesis with the title "THE COMPARISON OF

TRANSLATIONS PRODUCT USING CHAT GPT AND GOOGLE

TRANSLATE IN TRANSLATING SCIENTIFIC JOURNAL".

This Thesis is submitted to fulfil the requirement for "Sarjana" degree in

English Tadris Study Program in IAIN Curup. The researcher realizes this thesis

still needs improvement in the future. Furthermore, the researcher hopes and

appreciates some criticism that inteneded for this research. For being perfect in the

future. Also, the researcher hopes this thesis can be useful, especially for other

researchers who are interested in conducting research in the field.

Curup, July

2024

The Researcher

Habib Hakim

NIM. 20551023

٧

## **ACKNOWLEDGEMENT**

Bismillahirrahmanirrahim

Assalamu'alaikum wr.wh.

Alhamdulillahirobbil'alamin

All praise is only for Allah SWT, who has given mercy, taufik, and wisdom to the researcher. So that the researcher was able to complete this thesis. Shalawat and salam are always blessed to the Prophet Muhammad SAW for the advice given so that Muslims can be able to distinguish what is good and right, as well as bring their people from the dark ages (Jahiliyah) to the modern world as we feel today.

The researcher finished this thesis entitled "THE COMPARISON OF TRANSLATIONS PRODUCT USING CHAT GPT AND GOOGLE TRANSLATE IN TRANSLATING SCIENTIFIC JOURNAL". This thesis is submitted to fulfil the requirement for "Sarjana" degree in English Tadris Study Program in IAIN Curup. In the process of compiling this thesis. The researcher got support, guidance, assistance, contribution and motivation from the other. Because of those, the researcher would like to present deepest appreciation to:

- 1. **Prof. Dr. Idi Warsah, M.Pd.I** as the rector of IAIN Curup
- 2. **Dr. Sutarto, S.Ag., M.Pd** as the dean of the Tarbiyah faculty of IAIN Curup
- 3. **Jumatul Hidayah, M.Pd** as the head of the English Tadris Study Program.
- 4. **My special thanks to Dr. Sakut Anshori, S.Pd.I, M.Hum.** as my research advisor who has always provided invaluable advice, sources of knowledge, and support. It has been a great honor and joy to work under her guidance and scaffolding.
- 5. **My special thanks to Meli Fauziah. M.Pd.** as well as the researcher's co-advisor who mentored, supported, and taught many things, as well as all the advice she gave to the researcher to complete this research.

6. All the lectures of English Tadris Study Program that who gave your

support and wisdom to the researcher in doing this research.

7. My parents, Mr. Topan Hidayat and Mrs. Weli Angreni that who has

given me the opportunity to try college until the end, who has paid for my

studies until the end, who has supported me from start to finish. I just can

say thank you so much and I love them.

8. Kepada nona pemilik NIM.20531172 yang telah membersamai penulis

pada hari-hari yang tidak mudah selama proses pengerjaan

skripsi.Terimakasih telah menjadi rumah yang tidak hanya berupa tanah

dan bangunan. Tetapi membersamai dan tidak tunduk pada apa-apa. Tabah

sampai akhir

9. Many thanks to my friends: Paren, Farid, who has always been my gaming

buddy, and Della, who has helped me "a little," and other friends who have

always provided support and motivation until the completion of this thesis.

Additionally, I would like to thank my friends from the class of 2020, who

cannot all be named individually.

10. Lasly but not least, I wanna thank me. I wanna thank me for believing in

me. I wanna thank me for doing all this hard work. I wanna thank me for

having no days off. I wanna thank me for never quitting.

Finally, the researcher needs constructive suggestions for being perfect

researcher in the future. Hopefully, the result of this research will give

beneficial contribution to the development of education in English Tadris

Study Program and other school. For acknowledgment above, and those are

not mentioned, may Allah SWT give them reward. Aamiin

Wassalamualaikum Wr. Wb

Curup, July 2024

The Researcher

<u>Habib Hakim</u> NIM. 20551023

MIMI. 20221023

vii

# **MOTTO**

"Opportunities do not come twice, but they come to those who never stop trying."

"Nothing is impossible"

# **DEDICATION**

I proudly dedicate this thesis to myself, and my beloved parents, and I am proud of the English Tadris Study Program, as well as my friends and classmates of 2020. Thank you for your support and prayers for me. So, that I can finally complete this thesis. I love you all

#### **ABSTRACT**

Habib Hakim, 2022: The Comparison Of Translation Product Using ChatGPT

And Google Translate In Translating Scientific Journals

Advisor : Dr. Sakut Anshori, S.Pd.I, M.Hum.

Co-Advisor : Meli Fauziah. M.Pd.

The increasingly rapid development of technology provides urgency in every dimension of life, one of which is academics Language. The emergence of translation technology tools that are able to translate source languages into many target languages used by every group but the results are still many errors. Departing from this, in this research trying to focus on the quality of the translation results of two very familiar translation tools, namely ChatGPT and Google Translate. This research then uses qualitative methods by analyzing documents. There are samples of scientific journal texts that have been indicated by Scopus. From this research, the translation results were produced ChatGPT and Google Translate are both quite good in terms of accuracy and acceptability, but still need improvement in the readability aspect so that the translation results are more natural and easy to understand into the target language. However, from the results of the average assessment, ChatGPT got a score of 2.0 and Google Translate only got an average score of 1.7 and from the results of calculating the average score, ChatGPT was 0.3 points superior. And it can be concluded that both ChatGPT and Google Translate, these two translation engines are quite the same. good at translating scientific journals.

**Keywords:** ChatGPT, GoogleTranslate, Translation Quality, Machine Translations

# LIST OF CONTENT

The Statement of Ownershipiii	
Prefaceiv	
Acknowledgementv	
Mottovii	
Abstractviii	
List of Content	
List of Tables xi	
List of Abbreviationsxii	
List of Appendicesxiii	i
CHAPTER I. INTRODUCTION	
A. Background1	
B. Delimitation of the Research	
C. Research Question	
D. Objectives of The Research	
E. Significances of The Research8	
F. Definitions of Key Term8	
CHAPTER II. LITERATURE REVIEW	
A. Review of Related Theories	
1. Machine translation	
2. ChatGPT	
3. Google Translate	
4. Translation Quality	
5. Process of Translation	
6. Principle of Translation	
7. Type of translation	
8. Translation Quality Assessment 26	

9. Problem of Translation	29
B. Review of Previous Study	30
CHAPTER III. RESEARCH METHODOLOGY	
A. Research Approach and Type	34
B. Object of the Research	36
C. Reter	36
D.Technique for collecting data	37
E. Instrument of research	37
F. Data Analysis	42
CHAPTER IV. FINDINGS AND DISCUSSION	
A. Finding	43
B. Discussion	56
CHAPTER V. CONCLUSION AND SUGGESTION	
A. Conclusion	61
B. Suggestion	62

# LIST OF TABLES

Table 2.1 Accuracy Rating Instrumen	26
Table 2.2 Acceptability Rating Instrument	27
Table 2.3 Readability Rating Instrument	28
Table 2.4 Weight of the Quality Aspect	29
Table 3. 1 Translation quality assessment instrument	38
Table 3. 2 Translation Accuracy Rating Instrument	39
Table 3. 3 Translation Acceptance Rating Instrument	40
Table 3. 4 Readability Rating Instrument	40
Table 3.5 Average Formula	41
Table 3.6 Weight of the Quality Aspect	41
Table 3.7 Total Quality	41
Table 4.1 Mean ChatGPT	44
Table 4.2 Mean Google Translate	45
Table 4.3 Overall Score	47
Table 4.4 Examples of translation quality on accuracy	49
Table 4.5 Examples of translation quality on acceptability	51
Table 4.6 Examples of translation quality on readability	54

# **List of Abbreviations**

Abbreviations	Definition
NMT	Neural Machine Translation
CHATGPT	Chat Generative Pre-trained
	Transformer
SL	Source Language
TL	Target Language

## **CHAPTER I**

# **INTRODUCTION**

## A. Background

Translation is a very important skill as a language transformation process. Translation is very valuable for people who do not understand a foreign language to obtain information. From the results of the translation, can understand the message clearly and understand all the information. According to Suhendra, "Translation is a process of transferring messages contained in a first language text or source language (source language) to its equivalent in a second language or target language (target language)". This means that the translation process is related to the process of transforming messages in the Source Language (TL) into the Target Language (TL). In conveying a message, the translator must produce the best translation. It is generally accepted that the best translations are produced by people who translate into their own native language.

Language plays an important role in the development of the education sector. Therefore, it is important to learn and understand the language of other countries to be able to interact with them. Even though technology has advanced significantly today, learning a language manually is still essential to understand it thoroughly.<sup>2</sup> The presence of technology sometimes brings concerns to the

<sup>&</sup>lt;sup>1</sup> Suhendra Yusuf, Teori Terjemah (Pengantar ke Arah Pendekatan Linguistik dan Sosiolinguistik). Mandar Maju, Bandung: 1994, p.8

education sector, such as ChatGPT. ChatGPT itself is an abbreviation of Chat Generative PreTrained Transformer and is a chat bot.

A chatbot is an artificial intelligence (AI) program that automatically sends text messages to users. ChatGPT is used on the web: https://chat.openai.com/chat uses the chat method. ChatGPT has speed and efficiency so it can process data and produce articles quickly and efficiently. This speeds up the article creation process and reduces the time required. Additionally, ChatGPT can identify synonymous words to ensure proper grammar and word usage are used in the resulting articles.

And Google Translate uses a large artificial neural network to predict the likely order of words or their appropriate context, resulting in more accurate and contextually appropriate translations. In recent years, NMT technology has become very popular and is used in various applications, including Google Translate. This technology has helped improve translation accuracy and allows users to contribute to improving translation results.

Not only in the development of knowledge but also in the modern technology very depend on English. Translation has been used in many fields of human life, ranging from business world to educational field. Every people who want to know what other people say, they have to translate the language to their language. So, the translator must have enough knowledge about spoken language or kind of text or the problem will be translated.

Eugene A. Nida and Charles R. Taber, in their book The Theory and Practice of Translation quoted by A. Widyamartaya, say "Translating consists of reproducing the natural equivalent in the recipient language which is closest to the message of the source language, first in terms of meaning and the second is in terms of style. In the translation process, we will try to find the closest meaning to words in English, one word has a different meaning in Indonesian, for example the word "rice" in English could be translated into Indonesian as "beras" or "nasi". 3

Translation is not as simple as most people think. It's more than just the ability to speak the target language and understand it. Moreover, many people think translation is easy. They think that translation is just translation. However, there are many aspects that must be known and mastered. As stated by Nababan, "In every discussion regarding the product of a translation, the issue of quality always receives very serious attention. This is closely related to the function of translation as a communication tool between translators of source language texts and target language texts. The success or failure of a translation in its function as a communication tool depends greatly on its quality.<sup>4</sup>

Translation by ChatGPT, Google Translate, and other tools is not always perfect in quality. Nonetheless, the translated results are not always easily understood by readers in the target language.<sup>5</sup> This is because translations often

<sup>3</sup> A. Widyamartaya, Seni Menerjemahkan, Kanisius, Yogyakarta:2003 P.11

<sup>&</sup>lt;sup>4</sup> Nababan, keterkaitan antar latar belakang penerjemah dengan proses penerjemahan dan kualitas terjemahan, Surakarta: PPs Universitas Sebelas Maret, 2004 P. 54

<sup>&</sup>lt;sup>5</sup> Nababan, M. R., Nuraeni, A., & Sumardiono. (2012). *Teori terjemahan: Pengantar ke dalam bidangnya*. Yogyakarta: Pustaka Pelajar.

deviate from the original language, leading to confusion for readers. Translation outcomes should prioritize quality. Evaluating translation quality involves several aspects, including accuracy, acceptability, and readability.<sup>6</sup>

Speaking about the quality of translation from several previous studies, it is evident that there are still issues. For instance, research by Irawati Br Munthe states that in Comparing Translation Accuracy Between Google Translate and Professional Translators<sup>7</sup>, Google Translate achieved an average score of 2.36, which falls below the accuracy threshold as scores ideally should be 2.5 or higher to be considered accurate.

Another study conducted by Rusmita Aeni et al., titled The Accuracy of ChatGPT in Translating Linguistic Texts in Scientific Journals, found that ChatGPT achieved a 93.6% accuracy rate. This study concluded that ChatGPT performed very well in translating scientific journals.<sup>8</sup>

Lastly, research by Lucía Sanz-Valdivieso & Belén López-Arroyo in Google Translate vs ChatGPT: Can Non-language Professionals Trust Them for Custom Translations?<sup>9</sup>. indicated that ChatGPT made fewer terminological errors compared to Google Translate.

<sup>7</sup> Irawati Br Munthe et al., 2023 'Comparing Translation Accuracy Between Google Translate and Professional Translators

<sup>&</sup>lt;sup>6</sup> Larson, M. L. (1984). *Meaning-Based Translation: A Guide to Cross-Language Equivalence*. University Press of America.

<sup>&</sup>lt;sup>8</sup> Rusmita Aeni et al. 2024 "the accuracy of cht gpt in translating linguistic texts in scientific journals"

<sup>&</sup>lt;sup>9</sup> Lucía Sanz-Valdivieso & Belén López-Arroyo 2023 Google Translate vs ChatGPT: Can be non-language professionals trust them for custom translations?

Previous language translation issues primarily stem from inaccuracies and context-inappropriate translations. These issues can lead to misunderstandings and less effective communication.

Based on the above phenomenon, researchers tried to focus on examining the quality of translation results between two familiar translation machines, namely Google Translate which uses Google Translate (Neural Machine Translation) technology and ChatGPT which uses the GPT (chat generative pre-trained transformer) system. why google translate, because Students frequently use Google Translate due to its accessibility and speed, given the limited time available to complete academic assignments. This tool also serves as a solution for those with limited proficiency in foreign languages, providing basic translations without requiring a deep understanding of grammar and vocabulary. Additionally, Google Translate is a free tool, making it an economical choice compared to professional services or translation books. As a learning aid, it allows students to compare automatic translations with manual ones, helping them improve their understanding of language structure and vocabulary. Advances in translation technology have also made this tool more accurate and reliable as an initial reference. Furthermore, in cases where academic materials are not available in their native language, Google Translate helps students access literature or articles in foreign languages. However, they are reminded not to rely entirely on this tool due to its limitations in handling language nuances, cultural context, and technical terminology. And why Chat GPT because Students frequently use ChatGPT for translation because it offers more contextual and natural translations, thanks to its ability to understand nuances and idioms in text. Additionally, ChatGPT can handle specialized and technical language often found in academic literature and provides interaction that allows students to ask for further clarification or explanations of specific terms or concepts. Its flexibility in adjusting the language style to meet user needs, the ability to learn from user feedback, and its ease of access make ChatGPT an effective choice. This tool also aids in cross-language learning by providing examples of correct usage in specific contexts. However, students are reminded to remain critical of the translation results and verify them with other sources to ensure accuracy and appropriateness in academic contexts. because you need to know that recently the development of these two translation machines has been very rapid. ChatGPT with Transformer-based artificial intelligence technology, developed by OpenAI. More specifically, this model is based on the GPT (Generative Pre-trained Transformer) architecture and Google Translate uses an artificial intelligence-based technology known as Neural Machine Translation (NMT).

Based on the facts above, researchers are interested in the case of THE COMPARISON OF TRANSLATIONS PRODUCT USING CHAT GPT AND Google Translate IN TRANSLATING SCIENTIFIC JOURNALS in terms of translation quality based on the aspects of accuracy, acceptability and readability.

#### **B.** Delimitation of the Research

To obtain accurate and high-quality results, it is necessary to narrow the scope of the problem to focus on the main topic, which is the quality of translations by ChatGPT and Google Translate of scientific journals indexed by Scopus from English to Indonesian. In this case, the researcher aims to determine the translation quality based on the aspects of accuracy, acceptability, and readability. The researcher uses only one English-language scientific journal indexed by Scopus and applies the theory from Nababan, Ardiana Nuraeni, and Sumardiono on the development of a translation quality assessment model.<sup>10</sup>

## C. Research Question

Based on background of study, the research questions are formulated as follow:

- 1. How is the quality of Chat GPT in translating scientific journal?
- 2. How is the quality of Google Translate in translating scientific journal?
- 3. Which one is the most significant based on the translation theory?

# D. Objectives of The Research

- 1. To Explain the quality of translation by using ChatGPT
- 2. To Explain the quality of translation by using Google Translate
- 3. To know the most significant translation tools based on translation theory

Nababan, Ardiana Nuraeni & Sumardiono "Pengembangan model penilaian kualitas terjemahan." (2012).

## E. Significances of The Research

This research is focused on The Comparison Of Using ChatGPT And Google
Translate For Students Traslating Sciencif Journal.

#### 1. For Lectures.

So that later we can help lecturers in translating scientific journals at any time if necessary to find out which application is more accurate in translating scientific journals.

#### 2. For Students

So that later it can help you in carrying out scientific journal translation assignments and make it easier for you to choose techniques for translation.

# F. Definitions of Key Term

This part involves the definition of key terms. They are ChatGPT, Google Translate, Translation and scientific journal.

# a. ChatGPT

ChatGPT is a variant of the GPT-3 (Generative Pre-trained Transformer 3) artificial intelligence language model developed by OpenAI. This tool is specifically designed to produce human-like text in a conversational style, and was introduced widely in 2021. is one of the most prominent developments in AI that has attracted the attention of the general public and researchers from various scientific disciplines. This AI-based chatbot, a Large Language Model (LLM), uses a deep learning neural network with many parameters trained on extensive data through a self-supervised learning algorithm. When faced with

various questions, this robot can create convincing and insightful text answers

# **b.** Google Translate

Google Translate with Neural Machine Translation (Google Translate) refers to the use of advanced deep learning techniques to translate text from one language to another. Unlike previous phrase-based methods, Google Translate uses artificial neural networks, specifically designed to model the entire sentence as a single unit rather than translating piece-by-piece. This allows the system to capture more context and provide more fluent and accurate translations. Introduced by Google in 2016, Google Translate has significantly improved the quality of translations by understanding the nuances and meanings in the source and target languages. The system continually learns and improves over time, making it a powerful tool for translating complex and context-dependent texts.

# c. Translation

Translation is the process of transferring meaning from one language (source language) to another language (target language) with the aim of preserving the original message and context as accurately as possible. This process involves a deep understanding of language structure, cultural context, and communication purposes to ensure that the translated text conveys a message that matches the

<sup>11</sup> Brown, T. B., Mann, B., Ryder, N., Subbiah, M., Kaplan, J., Dhariwal, P., ... & Agarwal, S. (2020). Language Models are Few-Shot Learners. *Advances in Neural Information Processing Systems*, 33.

author's true intent. Translation is not just word for word substitution but also involves adaptation and interpretation to overcome linguistic and cultural differences between the source language and the target language.<sup>12</sup>

#### d. Scientific Journal

Scopus-indexed scientific journals refer to scientific journals that have been assessed and accepted by the Scopus database, one of the world's largest and leading bibliographic databases for scientific literature. Journals indexed by Scopus are recognized for their quality, relevance and impact in the field of science. The indexing process at Scopus involves a rigorous evaluation of editorial quality, research methodology, and contribution to scientific developments. These journals are often important sources for research and reference in academic and scientific communities <sup>13</sup>

# e. Translation Quality

Translation quality refers to the extent to which the translation of a text meets the standards of accuracy, clarity, and fidelity to the original meaning and context of the source language. Translation quality covers several aspects, including accuracy in transferring information, acceptability in the target language, and suitability to the cultural context. Assessment of translation quality often involves criteria such as clarity, fluency, and consistency, as well as the ability to retain the original nuance and meaning of the source text.

1 7

<sup>&</sup>lt;sup>12</sup> Nababan, Ardiana Nuraeni, & Sumardiono. (2012). *Pengembangan model penilaian kualitas terjemahan*.

<sup>&</sup>lt;sup>13</sup> Falagas, M. E., & Pitsouni, E. I. (2008). "Comparative effectiveness of PubMed, Scopus, and Web of Science for searching the medical literature." *F1000 Research*.

#### **CHAPTER II**

## LITERATURE REVIEW

#### **B.** Review of Related Theories

## 1. Definition of machine translation

Machine translation is a technology used to translate text or information from one language to another. Machine translation uses algorithms and technology such as neural networks to predict the likely order of words or the appropriate context, so that it can produce more accurate and contextually appropriate translations.

Machine translation, or machine translation (MT), is a technology that utilizes algorithms, mathematical models, and artificial intelligence to automatically translate text or speech from one language to another. Experts in the fields of computational linguistics, artificial intelligence, and translation have provided an in-depth and comprehensive definition of machine translation, covering the approaches used, working principles, and challenges faced in its development and implementation. Here are some definitions and explanations from experts:

1. John Hutchins, a leading researcher in the field of machine translation, provides a comprehensive definition of machine translation: "Machine translation is the process of translating text or speech from one natural language to another language carried out by computers. This technology utilizes a variety of natural language processing techniques and artificial intelligence algorithms to understand, analyze, and produce accurate and contextually appropriate

translated text" Hutchins emphasizes that machine translation involves a deep understanding of the source and target languages, and requires algorithms capable of capturing nuances of meaning and context in the original text. <sup>14</sup>

2. Yorick Wilks, a computational linguistics expert, provides a definition that highlights the artificial intelligence aspect of machine translation: "Machine translation is an application of artificial intelligence designed to mimic the human ability to translate text from one language to another. This technology uses natural language processing to analyze the structure and meaning of the source text, then produce a text in the target language that maintains the meaning and feel of the original"

This definition underlines that machine translation is a part of the field of artificial intelligence that attempts to replicate human translation capabilities through advanced natural language processing techniques.<sup>15</sup>

3. Alan Melby, an expert in the theory and practice of translation, provides a definition that includes the use of linguistic data and algorithms: "Machine translation is a system that uses a combination of computational algorithms and linguistic data to automatically produce translations between languages. These systems can operate independently or in hybrid configurations involving collaboration between humans and machines to improve translation quality and accuracy"

12

Hutchins, J. (1995). *Machine Translation: Past, Present, Future*. Ellis Horwood.
 Wilks, Y. (1992). *Machine Translation: Its Scope and Limits*. Springer.

Melby emphasized that machine translation can function both automatically and with human assistance, and the importance of linguistic data in the translation process.<sup>16</sup>

4. Harold Somers, a researcher in machine translation, provides a definition that emphasizes software and mathematical models: "Machine translation is the use of computer software to translate text or speech from one language to another. This process often involves statistical or network models artificial neural to learn translation patterns from bilingual data and produce accurate and contextual translations" This definition emphasizes the use of software and statistical or neural models, which are the main approaches in modern machine translation.<sup>17</sup>

5. Philip Koehn, an expert in the field of statistical and neural machine translation, provides a more specific definition of the approach and technology used: "Machine translation is a technology that automates the process of translating texts using a statistical or neural approach. This technology is based on analysis and bilingual text data modeling, which allows the system to learn the relationship between the source language and the target language, and produce consistent and contextual translations"

-

<sup>&</sup>lt;sup>16</sup> Melby, A. (1995). The Possibility of Language: A Discussion of the Nature of Language, with Implications for Human and Machine Translation. John Benjamins Publishing.

<sup>&</sup>lt;sup>17</sup> Somers, H. (2003). *Computational Linguistics and Machine Translation*. John Benjamins Publishing.

Koehn emphasized the importance of bilingual data and statistical and neural methods in the development of machine translation, as well as how these technologies can produce better translations through learning from data<sup>18</sup>.

## 2. Definition of CHAT GPT

ChatGPT, as an artificial language model developed by OpenAI, can be used as a translation tool. Although ChatGPT is not a specialized machine translation system like Google Translate, it can produce translations by leveraging its ability to understand and generate text in multiple languages. The model is trained on a diverse range of language data and can handle numerous languages, allowing it to translate text with a broader context compared to more traditional phrase-based translation systems. ChatGPT utilizes the Transformer architecture, which enables deep contextual understanding and the generation of more natural and coherent text<sup>19</sup>

One of the main advantages of ChatGPT as a translation tool is its ability to comprehend and produce translations in complex contexts. The model can handle idiomatic expressions and unusual phrases better due to its capability to understand entire sentence contexts. Additionally, ChatGPT can provide translations that are more flexible and tailored to specific user needs. This is different from phrase-based translation systems that might produce translations that are rigid and less natural. The model can also learn and improve over time

0

<sup>&</sup>lt;sup>18</sup> Koehn, P. (2010). Statistical Machine Translation. Cambridge University Press.

<sup>&</sup>lt;sup>19</sup> Vaswani, Ashish, et al. (2017). "Attention is All You Need." *Advances in Neural Information Processing Systems (NeurIPS)*.

with continued use, enhancing translation accuracy as data and understanding improve<sup>20</sup>

However, despite the various advantages offered by ChatGPT, there are some drawbacks to consider. A major limitation is its reliance on existing training data; if the model has not been extensively trained on a particular language or context, the quality of translation may decrease. Furthermore, ChatGPT may not always fully grasp cultural or contextual nuances, which can result in translations that are not entirely accurate or aligned with the original meaning. The model tends to produce consistent translations but may not always be precise in technical or specialized contexts, as it is not specifically designed for technical translation like some other systems<sup>21</sup>

# 3. Definition of Google Translate

Google Translate utilizes Neural Machine Translation (Google Translate) technology, which is one of the latest methods in machine translation. Google Translate employs neural networks to analyze and understand the entire context of a sentence, unlike previous methods that often focused on word-by-word translation. This approach allows Google Translate to produce translations that are more accurate and natural. The Google Translate model considers the entire sentence during the translation process, resulting in translations that are more coherent and aligned with the original meaning. A major advantage of this

<sup>20</sup> Brown, Tom B., et al. (2020). "Language Models are Few-Shot Learners." *Proceedings of the 34th Conference on Neural Information Processing Systems (NeurIPS)*.

<sup>&</sup>lt;sup>21</sup> Radford, Alec, et al. (2019). "Language Models are Unsupervised Multitask Learners." *OpenAl*.

system is its ability to handle complex phrases and idioms better than phrasebased methods, which often produce less fluent translations<sup>22</sup>

However, despite the significant improvements offered by Google Translate, there are still some drawbacks to consider. One major limitation is the potential for errors in complex or ambiguous contexts, particularly in languages with structures that are very different from the source language. Although Google Translate is designed to handle multiple languages simultaneously, the quality of translation can vary depending on the language used. Languages with limited data may experience less satisfactory translation results because the system requires a large amount of data for effective training<sup>23</sup>

Furthermore, while Google Translate can enhance translation capabilities, it still faces challenges in handling idiomatic expressions and very specific nuances from the source language. This can lead to translations that are less aligned with the context or original meaning of the text. Idiomatic translations or highly specific nuances are often difficult to accurately retain by the Google Translate system, sometimes resulting in less satisfactory translations. Research by Bahdanau, Luong, and Vaswani shows that while Google Translate addresses many of the limitations of previous methods, it still faces constraints

<sup>&</sup>lt;sup>22</sup> Bahdanau, Dzmitry, Kyunghyun Cho, and Yoshua Bengio. (2015). "Neural Machine Translation by Jointly Learning to Align and Translate." *International Conference on Learning Representations (ICLR)*.

<sup>&</sup>lt;sup>23</sup> Luong, Minh-Thang, and Christopher D. Manning. (2015). "Stanford Neural Machine Translation Systems for Spoken Language Domain." *Proceedings of the 2015 Conference on Empirical Methods in Natural Language Processing (EMNLP)*.

in managing complex contexts and translation quality in languages with limited resources<sup>24</sup>

## 4. Translation Quality

Translation quality is a crucial aspect in the field of translation that determines how well a text is translated from the source language to the target language. In my view, good translation quality must meet several main criteria, namely accuracy, readability, suitability for cultural context, and authenticity of meaning.

- a) Accuracy: This is the basis of a good translation. The translated text must maintain the original meaning of the source text without adding, subtracting, or changing important information. Every word, phrase, and sentence must be translated precisely according to the original author's intent.
- b) Readability: The translated text must be easy to read and understand by target language readers. Sentence structure, word choice, and grammar must conform to the norms of the target language so that the text feels natural and fluent.
- c) Cultural Context Appropriateness: A quality translation must also take into account the cultural differences between the source language and the target language. This includes the use of idioms, expressions, and cultural

17

<sup>&</sup>lt;sup>24</sup> Vaswani, Ashish, et al. (2017). "Attention is All You Need." *Advances in Neural Information Processing Systems (NeurIPS)*.

references that may require adaptation to be relevant and understandable to the target reader.

d) Authenticity of Meaning: The translation must be able to convey the same meaning and nuance as the source text. It involves a deep understanding of the source text and the ability to transfer that meaning into the target language without losing its essence.

By considering these aspects, a quality translation can ensure that the message conveyed in the source text can be well received by target language readers, without losing the original meaning or context.

Experts in the field of translation have researched and developed various criteria for assessing translation quality. The following are some views and research results from experts regarding translation quality:

- 1. Nida is one of the leading figures in translation studies. According to him, the quality of a translation is determined by the extent to which the translation produces the same effect on the target reader as the original text did on the source reader. Nida emphasizes the importance of dynamic equality, where the focus is on acceptability and clarity for the target audience<sup>25</sup>
- 2. Newmark distinguishes between two main approaches to translation: semantic translation and communicative translation. According to Newmark, a quality translation must take into account the cultural context and idioms of the target language to achieve a balance between accuracy

<sup>&</sup>lt;sup>25</sup> Nida, E. A., & Taber, C. R. (1982). The Theory and Practice of Translation. Brill.

and acceptability. He also emphasized that translations must be faithful to the meaning and message of the source text while maintaining readability for the target reader<sup>26</sup>

- 3. Larson argues that translation quality depends on three main criteria: accuracy, acceptability, and readability. According to him, a good translation must be faithful to the source text (accuracy), acceptable in the target language in accordance with cultural and linguistic norms (acceptability), and easy to read and understand by the target reader (readability)<sup>27</sup>
- 4. Venuti emphasized the importance of openness in translation, where the translation process must include translating not only the words but also the cultural context. He also criticized approaches that placed too much emphasis on readability and acceptability because they could omit important elements from the source text<sup>28</sup>
- 5. Translation quality assessment can be defined as the process of evaluating the quality of a translation. This process often involves comparing the translation to the source text and assessing it based on various criteria such as accuracy, fluency, and appropriateness for the target audience

<sup>&</sup>lt;sup>26</sup> Newmark, P. (1988). A Textbook of Translation. Prentice Hall.

<sup>&</sup>lt;sup>27</sup> Larson, M. L. (1984). *Meaning-Based Translation: A Guide to Cross-Language Equivalence*. University Press of America.

<sup>&</sup>lt;sup>28</sup> Venuti, L. (1995). The Translator's Invisibility: A History of Translation. Routledge.

From the views of these experts, it can be concluded that good translation<sup>29</sup> quality must meet several main criteria:

- 1. Accuracy: Fidelity to the meaning and message of the source text.
- 2. Acceptability: Conformity to the cultural and linguistic norms of the target language.
- 3. Readability: The ease of reading and understanding the text by the target reader.

#### 5. Process of Translation

De maar in his book that quotated by widyamartaya divide the process of translation into three stages namely, (a) Membaca dan mengerti karangan itu: (b) Menyerap segenap isinya dan membuatnya menjadi kepunyaan kita; (c) Mengungkapkannya dalam langgam bahasa kita dengan kemungkinan perubahan sekecil-kecilnya akan arti atau nadanya. 30 From that quoted, we have to read and understand the content of the text that we express with our language.

Moreover, Nida and Taber in Munday divide the process of translating into three stage system: 1) analysis of massage in the SL; 2) transfer, and; 3) reconstruction of the transferred massage in the TL. This process is described in the following diagram.

 $<sup>^{29}</sup>$  House, Juliane. Translation Quality Assessment: Past and Present. Routledge, 2015.  $^{30}$  Widyamartaya, Op.Cit.p.15

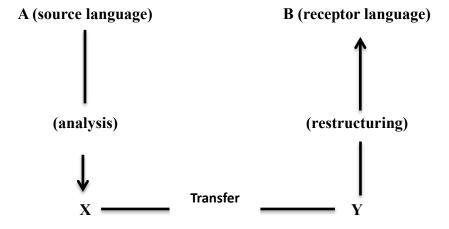


Diagram of translation.31

From the diagram above may conclude that in the process of translation, translator should analyze the source language (A) and the result of analyze is X. Then transfer X into Y, and Y as a result of the transferring is restricted into receptor language (B), so that the massage from source language (A) can be transferred into receptor language (B).

Someone have to mastering three steps in translation. It means that, if someone wants to translate something like word or sentence, they should pass those steps. It is used to help the translator to translate something.

# 6. Principle of Translation

There are so many principles of translation based on experts, one of them is Theodore Savore in his book "the art of translation" that quotated by

Suhendra Yusuf said that:

<sup>&</sup>lt;sup>31</sup> Jeremi Munday, Op.Citp.40

- Translators must be able to find equivalents in accordance with the meaning of the original words;
- 2. Translators must be able to present the ideas of the original;
- 3. Translators should be able to produce work of translation can be read easily;
- 4. Translators should be able to produce work of translation which can reflect the style of the original author of the manuscript;
- 5. Translators should also have an independent style of translation;
- 6. Translators should be able to produce work of translation that can be read in accordance with the contemporary language of the original text;
- 7. Translators should also be able to create a work of translation which can be read as a contemporary language translators;
- Translators can perform addition or subtraction of certain parts of the original manuscript
- 9. Translators should also do what it is, do not reduce or add certain parts;
- 10. Translator can translate a poem in prose;32
- 11. Translators can also transfer it in the form of a poem rhyme gain. 15 On the other source the principles of translation divided into four that

## a. Lexical Meaning

Lexical meaning is literal meaning. It refers to the meaning in the dictionary.

There are some units of lexical meaning: word, synonym, antonym, homonym, and polysemy.

<sup>&</sup>lt;sup>32</sup> Suhendra, Yusuf. Teori Terjemah. Mandar maju

Example:

SL: Teacher becomes persuaded that competition in the classroom was the best way to promote industry among scholars.

TL:

Incorrect: Para pendidik diyakinkan bahwa persaingan dalam kelas adalah cara terbaik untuk mempromosikan industri diantara murid-murid.

Correct : Para pendidik menjadi yakin bahwa persaingan di dalam kelas adalah cara terbaik untuk meningkatkan kerajinan belajar diantara para murid.

Based on the example above we can conclude that the word promote has two meaning, there are mempromosikan and meningkatkan. It is suitable if it becomes meningkatkan.

## b. Syntactic Meaning

Syntax is the part of grammar, or the subsystem of a grammar, that deals with the position, order, and function of words and larger units in sentences, clauses, and phrases. The rule of English syntax is not numerous and complex, that they will never be fully codified.33

The syntactic meaning that the translator encounter many long sentence which are complex in form and that they have difficult in understanding the meaning and relationship among the sentence.

<sup>33</sup> Opca, P. 11

23

### Example:

Against this background it is difficult to explain the Indian influence on old Javanese which was as we have seen, almost exclusively Sanskrit - as being the result of ordinary social contacts or, in particular, and has been suggested, of intermarriage between Indonesia and foreigners of Indian origin who had established themselves either temporarily of permanently in Java.

From above paragraph, we can divide it into three:

- 1. From sentence "which was....exclusively Sanskrit". It is translated become: Telah kita lihat, bahasa Jawa kuno dipengaruhi hampir secara eksklusif oleh bahasa Sanskerta.
- 2. From sentence "against this background....social contacts". It is translated become: Dengan latar belakang itu tidaklah mudah pengaruh India diteranglan sebagai akibat hubungan hubungan sosial yang biasa.
- 3. From sentence "or, in particular....permanently in Java". It is translated become: atau khususnya sebagai akibat perkawinan sebagaimana telah disarankan orang, yaitu antara orang-orang Indonesia dan orang-orang asing asal India yang secara sementara atau seterusnya telah menetap di Jawa.

#### c. Style

Style is the spirit, consider carefully in what spirit or mood the original is written. If it's familiar, be familiar in your translation, if elevated give to your translation on elevated tone.

#### d. Naturalness

The translation should be natural receptor language (second language) equivalent of the source language (first language).34

## 7. Type of translation

In Venuti's book stated that the kind of translation is devided into three differently labeled:

1. Intralingual translation or rewording is an interpretation of verbal signs by means of other signs of the same language.

For instance: Charles dickens Animal farm is rewording into children language version but still in English.

2. Interlingual translation or translation proper is an interpretation of verbal signs by means of some other language.

For instance: a text in Indonesian is translated into English.

A novel by Andrea Hinata, Laskar Pelangi has been translated into English become The rainbow troops.

3. Intersemiotic translation or transmutation is an interpretation of verbal signs by means of signs of nonverbal sign systems.

For instance: if we see one symbol on the road, which picture is a spoon and a fork, it means that we will find a restaurant not too far from the road.<sub>35</sub>

-

<sup>&</sup>lt;sup>34</sup> Widyamartaya., Op.cit. P. 2

From the source above, can be conclude that there are three types of translation are intralingual, interlingual, and intersemiotic translation.

## 8. Translation Quality Assessment

The assessment referred to here is an assessment of the product and not the translation process. Product-oriented research focuses on translation work. The advantage of product research lies in its ability to provide feedback regarding the quality of the translation to readers of the target text.

The quality of translation can be measured from three things as quoted in Nababan, namely: (1) the accuracy of the transfer of the message. (2) the harmony of the message, (3) the naturalness of the translated language. In other words, translation quality can be measured by accuracy, acceptability, and readability.

Accuracy is determined by how precisely the meaning of the source language is translated into the target language. The level of distortion of meaning from the source language to the target language is an indicator of the level of translation accuracy. In this study, researchers used a modified accuracy assessment instrument adapted from Nababan, M.R., Nuraeni, A., & Sumardiono:

Table 2.1 Accuracy Rating Instrument<sup>36</sup>

Category	Scale	Indicator	
Accurate (A)	3	The content of the source sentence is accurately conveyed into the target sentence, the translated sentence is clear to	
		the evaluator and no rewriting is needed	

<sup>&</sup>lt;sup>35</sup> Lawrance, Venuti. The Translation studies reader. Roudledge, New York: 2000. P 114

Nababan, M.R., Nuraeni, A., & Sumardiono. "Pengembangan Model Penilaian Kualitas Terjemahan." Kajian Linguistik dan Sastra, vol. 24, no. 1, 2012, pp. 39-57

Less Accurate (LA)	2	The content of the source sentence is accurately conveyed to the source sentence. The translated sentence can be clearly understood by the evaluator, but some rewriting and some change in word order are needed
In accurate (IA)	1	The content of the source sentence is not accurately conveyed to the target sentence. There are some problem with the choice of lexical item and with the relationships between phrase, clause and sentence elements

Discuss about acceptability of translation, is how the language used to divert of meaning is familiar to native speakers. To assess the acceptability, researcher used acceptability rating instrument that quotated on a article by nababan bellow:

Table 2.2 Acceptability Rating Instrument<sup>37</sup>

Category	Score	Indicator
Accepted	3	Translation is not natural or likes translation; technical term which is used commonly, used and familiar to the reader, phrases clauses and sentences that are used are in accordance with the rules of Indonesian
Less Accepted	2	In general, the translation has been felt natural, and yet there is a little problem with the use of technical terms or occur few grammatical errors
In Accepted	1	Translation is not natural or feels like the work of translation; technical terms used are not commonly used and familiar to readers of phrases, clauses, and sentences that are not used in accordance with the rules, of Indonesian

Readability refers to use of language that is logical and easy to understand. To support level of readability, the researcher used readability rating instrument as a basic assessment.

27

<sup>&</sup>lt;sup>37</sup> Nababan, M.R., Nuraeni, A., & Sumardiono. "Pengembangan Model Penilaian Kualitas Terjemahan." Kajian Linguistik dan Sastra, vol. 24, no. 1, 2012, pp. 39-57

Table 2.3 Readability Rating Instrument<sup>38</sup>

Category	Score	Indicator
High Readability	3	Words, technical terms, phrases, clauses, sentences or text translation can easily understand by the reader.
Middle Readability	2	In general, the translation can be understood by the reader, but there are certain parts that should be read more than once to understand the translation Translation difficult to understand by the reader
Low Readability	1	Translation difficult to understand by the reader

So, the translation is not only accurate, but also has to accepted and easy to read.

For each aspect of the quality of the translation has a different weight. Accuracy aspect has the highest weight that is 3. It was adapted to the basic concept of the process of translation as a process of message (accuracy) of the source language text into the target language. Aspects of translation acceptability occupy on second place, which is 2. Determination was based on the premise that the acceptability aspects directly related to compliance with the rules of translation, and cultural norms prevailing in the target language. In certain cases, acceptability aspects have an affect to the accuracy aspect. In other words, in certain cases, a translation of which is less acceptable or not will also be lacking or inaccurate. Readability aspects have the lowest weight that is 1. The low weight given to aspects related to the readability of the thought that translation problems not directly related to the issue of whether or not the translation is easy to understand by the target reader. However, because the target readers generally

Nababan, M.R., Nuraeni, A., & Sumardiono. "Pengembangan Model Penilaian Kualitas Terjemahan." Kajian Linguistik dan Sastra, vol. 24, no. 1, 2012, pp. 39-57

do not have access to the source language text, they would appreciate that they are reading a translation that they can understand easily.

Table 2.4 Weight of the Quality Aspect

No	Quality Aspect	Weight
1	Accuracy	3
2	Acceptability	2
3	Readability	1

# 9. Problem of Translation

On mona Baker's book, there are some common problems of non- equivalence of word level:

- a) Culture specific consept,
- b) The source language concept is not lexicalized in the target language,
- c) The source language word is semanticaly complex,
- d) The source and target language make difference distingtion in meaning,
- e) The target language lacks a superordinate,
- f) The target language laks a specific term (hyponim).
- g) Differences in physical or interpersonal perspective,
- h) Differences expressive meaning,
- i) Differences in form,
- j) Differences in frequency and purpose of using spesific forms, 27

k) The use of loan words in the source text.39

In addition, general translation problems on an Article by Ahmad Maher

- 1. Pragmatic translation problems: Pragmatic translation problems are those arising from the particular transfer situation with its specific contrast of source language vs. target language recipients, source language medium.
- 2. Cultural translation problems: It is a result of the differences in the culture specific (verbal) habits, expectations, norms, and conventions verbal and other behaviours.
- Linguistic translation problems: The structural differences between two languages in texts sentence, structure and supra-segmental features give rise to certain translation problems.
- Text-specific translation problems: Any problems arising and not classified as the previous one is classified Text-specific translation problem.40

There are many problems that are found by any other translation. Included on pragmatic, cultural, linguistic, and text-specific translation problem.

## **B.** Review of Previous Study

First article "the accuracy of cht gpt in translating linguistic texts in scientific journals" <sup>41</sup>This research aims to analyze the accuracy of ChatGPT in translating

<sup>39</sup> Mona Baker, In Other Word: A course Book On Translation, Routledge, London: 1992, p21-25

<sup>40</sup>Ahmad Maher Nakhallah, Difficulties and Problems Facing English Students at QOU in the Translation Process from English to Arabic and Their solutions, Al-Quds Open University

linguistic texts in scientific journals, explained using several theories. Snover's theory of finding error rates (HTER) and translation quality index to measure translation accuracy by Schiaffino and Zearo. Through the results of the analysis, it can be concluded that in the analysis of 2034 words using Snover theory, a specific category of translation errors was found in ChatGPT with a total of 6% errors, namely 15 writing errors (0.73%), 22 omission errors (1.32%), 72 placement errors (3.54%), and 17 shift errors (0.83%). With a total error of 6.4%, this makes ChatGPT's accuracy rate in translating scientific texts linguistically reaching 93.6%. From the results of this analysis, it can be concluded that ChatGPT has succeeded in translating scientific texts in the very good category.

The next result 'Comparing Translation Accuracy Between Google Translate and Professional Translators.'42 The aim of this study is to determine the comparison of accuracy between Google Translate and Professional Translators or How accurate is the translation by Google Translate and How accurate is the translation by professional translators. Data were taken from the article 'The Economics of Happiness' by Jeffrey D. Sachs. In this research, translations from Google Translate and Professional Translators were evaluated by assessors. The study utilized Nababan's theory The results of the research indicate that: 1 the accuracy of Google Translate has an average score of 2.36, categorized as less

<sup>&</sup>lt;sup>41</sup> Rusmita Aeni et al. 2024 "the accuracy of cht gpt in translating linguistic texts in scientific journals" <sup>42</sup> Irawati Br Munthe et al., 2023 'Comparing Translation Accuracy Between Google Translate and Professional Translators.'

accurate. The average score is 2.88, categorized as accurate, thus the score of translations by Professional Translators is higher compared to Google Translate."

Furthermore, research results "Google Translate vs ChatGPT: Can be non-language professionals trust them for custom translations?" the goal is to determine whether these systems can be translated terminology accurately in that domain, and, if so, what is the GPT-3.5 model dig into Google Translate. The results will help identify or discard possible language solutions for users who need to obtain text in custom English professional and internationalization purposes, but does not have a linguistic nature or economic resources to guarantee the quality of English texts. The results show that, although ChatGPT produces fewer terminological errors than Google Translate in terms of the severity of the error and the number of influencing samples, professionals cannot rely on it just use this tool first.

Lastly is research on "Evaluating The Accuracy Of Google Traslate And Chat GPT In Windows 11 Education Traslations Installation GUI Text In Indonesia: Component eror Category Application", aims to evaluated the translation accuracy of two popular engines translations, Google Translate and ChatGPT, by checking for errors they produce. This research uses the Koponen translation error category. This study focuses on the translation of installation GUI

<sup>&</sup>lt;sup>43</sup> Lucía Sanz-Valdivieso & Belén López-Arroyo 2023 "Google Translate vs ChatGPT: Can be non-language professionals trust them for custom translations?"

<sup>&</sup>lt;sup>44</sup> Harris Hermansyah Setiajid et al. 2023"Evaluating The Accuracy Of Google Traslate And Chat GPT In Windows 11 Education Traslations Installation GUI Text In Indonesia: Component eror Category Application"

texts Windows 11 Education to Indonesian. The main goal is to determine the categories of errors and their distribution in translations made by Google Translate and ChatGPT. The findings will help developers improve their algorithms and translation guides users in selecting the most appropriate translation system for a specific situations, especially when dealing with computer systems.

this study uses a qualitative method. The type of qualitative method used is non-interactive qualitative, namely research into concepts through document analysis<sup>45</sup> The data sources used as samples in this research are scientific journals indexed by Scopus so that they are relevant and reasonable. The data sources sampled in this research are scientific journals indexed in the Scopus database. The selection of these journals is based on the consideration that the journals indexed by Scopus have gone through a strict review and assessment process, so that the language used in scientific articles can be judged to be more accurate and reliable. Thus, using Scopus indexed journals as a data source can provide greater clarity in the analysis and interpretation of research results.

<sup>&</sup>lt;sup>45</sup> ames H. McMilllan dan Sally Schumacher, Research in Education: *A Conseptual introduction (New York: Longman*, cet.4, 2001), h. 38.

#### **CHAPTER III**

#### RESEARCH METHODOLOGY

## A. Research Approach and Type

## 1. Type of Research

Qualitative methods are research approaches focused on understanding social, cultural, or individual phenomena through the analysis of non-numeric data, such as interviews, observations, and documents. This approach aims to comprehend the meanings, experiences, and subjective views of participants or data sources in a deep and holistic manner. Unlike quantitative methods, which measure data with numbers and statistics, qualitative methods emphasize the context and interpretation of the collected data.

One type of qualitative method is the non-interactive qualitative method, which involves researching concepts through document analysis. In this approach, researchers analyze written documents such as articles, reports, books, or other materials to understand specific concepts, ideas, or themes without involving direct interaction with research subjects. Document analysis

allows researchers to explore and interpret existing texts to identify patterns, themes, and meanings relevant to the research topic 46.

In this study, the researcher analyzes the results of translations from ChatGPT and Google Translate through sentence by sentence analysis of a scientific journal, using document analysis as the type of analysis.

## 2. Research Methods

## a) Document analysis

Document analysis is a qualitative research method that focuses on the in-depth study and interpretation of information contained within written documents. This method involves a series of steps starting with the collection of relevant documents, such as reports, articles, policies, letters, and archives, which are then analyzed to identify themes, patterns, and meanings within them. Researchers begin by thoroughly reading and understanding the documents, paying attention to their structure, style, and context, before identifying key elements such as main themes and concepts. This process includes coding the text into specific categories and conducting a deep analysis of how the information relates to the issues or phenomena being studied. The goal of document analysis is to gain a deeper understanding of the meaning and context of the documents, and to relate the findings to existing theories or frameworks, thereby generating new and

<sup>46</sup> Bowen, Glenn A. (2009). "Document Analysis as a Qualitative Research Method." *Qualitative Research Journal*, 9(2), 27-40.

relevant insights into the research topic. This method is valuable in qualitative research because it allows researchers to explore and interpret data from written sources that often contain valuable information that may not be obtainable through other methods<sup>47</sup>

## B. Object of the Research

The object of this research is the product of the quality of translations produced by two leading machine translation tools: ChatGPT and Google Translate. This research focuses on analyzing and comparing the quality of translations produced by the two tools, with an emphasis on various criteria such as accuracy, acceptability, readability. aims to identify the strengths and weaknesses of each tool, thereby providing valuable insight into their effectiveness and reliability in automated translation.

# C. Reter

In this study, three raters are employed to evaluate the quality of translations produced by ChatGPT and Neural Machine Translation (Google Translate) systems, focusing on the translation of academic journals. These raters are bilingual in English and Indonesian and possess expertise in translation or practical experience in the field. Their assessment centers on the effectiveness of the translations, specifically analyzing three key aspects: accuracy, acceptability, and readability. This comprehensive evaluation aims to provide insights into the

4

<sup>&</sup>lt;sup>47</sup> Bowen, Glenn A. (2009). "Document Analysis as a Qualitative Research Method." *Qualitative Research Journal*, 9(2), 27-40.

strengths and limitations of each translation tool, offering a detailed comparison of their performance in handling scholarly texts.

## D.Technique for collecting data

In this research, researchers used one type of data collection technique, namely document analysis: Document analysis techniques. Qualitative data can be collected through document analysis. So, researchers use document analysis to collect data. By creating a translation quality table. With scientific journals from English (source language) to Indonesian (target language). and translated using the sentence by sentence method to see the quality of the translation which has three aspects, namely accuracy, acceptability and readability.

#### E. Instrument of research

Document analysis is a research method that involves the collection, evaluation, and interpretation of data from various forms of written documents, such as scientific articles, reports, books, or archives, to understand specific themes, concepts, or phenomena. This is done through the processes of gathering, assessing authenticity and relevance, coding and categorizing, as well as analyzing and interpreting the information contained within the documents. The function of document analysis in this study is to compare the translation results between ChatGPT and Google Translate in translating scientific journals.

The theory used in this study is from Nababan, Ardiana Nuraeni, and Sumardiono (2012), who define translation quality as the result of translation

evaluated based on three main aspects: accuracy, acceptability, and readability. According to them, a translation is considered high quality if it can convey an accurate meaning according to the source text, is well received by the target readers in terms of cultural and linguistic norms, and is easy to read and understand by the target audience.

researchers adapted instruments from the research by Nababan, M.R., Nuraeni, A., & Sumardiono (2012) on the development of a translation quality assessment model, as published in the Journal of Linguistic and Literary Studies. I adopted this research instrument because it is comprehensive and has been validated, and the instrument has been refined from previous research. The table can be seen below:

Table 3. 1 GPT and Google Translate chat translation quality assessment instrument

NO	SOURCE	TARGET		SCORE		
NO	LANGUAGE	LANGUAGE		ACCURACY	ACCEPTABILITY	READABILITY
		CHAT				
1		GPT				
1		Google				
		Translate				
		CHAT				
2		GPT				
2		Google				
		Translate				

# 1. Quality instrument

This research used instrument to asses the quality the translations they are accuracy ,acceptability, readability rating instrument as follow:

that a quality translation must fulfill three aspects: accuracy, acceptability and readability.48

Table 3. 2 Translation Accuracy Rating Instrument<sup>49</sup>

Category	Scale	Indicator
Accurate (A)	3	The content of the source sentence is accurately conveyed into the target sentence, the translated sentence is clear to the evaluator and no rewriting is needed
Less Accurate (LA)	2	The content of the source sentence is accurately conveyed to the source sentence. The translated sentence can be clearly understood by the evaluator, but some rewriting and some change in word order are needed
In accurate (IA)	1	The content of the source sentence is not accurately conveyed to the target sentence. There are some problem with the choice of lexical item and with the relationships between phrase, clause and sentence elements

Table 3. 3 Translation Acceptance Rating Instrument 50

<sup>&</sup>lt;sup>48</sup> Nababan et al., 2012 The Analysis of the Results of Acceptability on the Translation Results in the Unedited Version and Edited Version in the Novel "After You"

49 Source: Nababan et al, 2012: 45 "Nababan et al., 2012: "Translation Accuracy Assessment Instrument"

50 Source: Nababan et al, 2012: 45 "Nababan et al., 2012: Translation Acceptance Assessment Instrument"

Category	score	Indicator
Accepted	3	Translation is not natural or likes translation; technical term which is used commonly, used and familiar to the reader, phrases clauses and sentences that are used are in accordance with the rules of Indonesian
Less Accepted	2	In general, the translation has been felt natural, and yet there is a little problem with the use of technical terms or occur few grammatical errors
In Accepted	1	Translation is not natural or feels like the work of translation; technical terms used are not commonly used and familiar to readers of phrases, clauses, and sentences that are not used in accordance with the rules, of Indonesian

Table 3. 4 Readability Rating Instrument<sup>51</sup>

Category	score	Indicator		
High Readability	3	Words, technical terms, phrases, clauses, sentences or text translation can easily understand by the reader.		
Middle Readability	2	In general, the translation can be understood by the reader, but there are certain parts that should be read more than once to understand the translation Translation difficult to understand by the reader		
Low Readability	1	Translation difficult to understand by the reader		

# 3. Formula of Analysis

Table 3.5 Average Formula

_		
		Average
	NIO	

<sup>51</sup> Source: Nababan et al, 2012: 45 "Readability Rating Scales"

Accuracy	Acceptability	Readability
Total Score : total	Total Score : total	Total Score : total
Sentences = average	Sentences = average	Sentences = average

Table 3.6 Weight of the Quality Aspect

No	Quality Aspect	Weight
1	Accuracy	3
2	Acceptability	2
3	Readability	1

Table 3.7 Total Quality<sup>52</sup>

It should be noted that data analysis is not conducted quantitatively; instead, the researcher uses indicators that are then calculated using the average formula and explained qualitatively.

## F. Data Analysis

Qualitative data analysis according to Miles and Hubermen divides data analysis into three stages, namely:<sup>53</sup>

<sup>52</sup> Nababan, M.R., Nuraeni., A & Sumardiono. (2012). Pengembangan model penilaian kualitas terjemahan. Jurnal Kajian Linguistik dan Sastra

Kajian Linguistik dan Sastra
<sup>53</sup> Miles, M. B., Huberman, A. M., & Saldana, J. (2014). Qualitative Data Analysis: A Methods Sourcebook (3rd ed.). SAGE Publications.

- 1. Data codification. In this case, it is the data coding stage. The researcher gives a name or designation to the research results.
- 2. The data presentation stage is a further analysis stage where the researcher presents research findings in the form of categories or groupings. In this case, data presentation is done by collecting data that is tailored to the problem.
- 3. The conclusion drawing or verification stage is an advanced stage where this stage draws conclusions from the data findings and presents the data and can double check to ensure that no errors have been made.<sup>54</sup>

<sup>&</sup>lt;sup>54</sup> Miles, M. B., & Huberman, A. M. (1994). Qualitative Data Analysis: An Expanded Sourcebook (2nd ed.). SAGE Publications

#### **CHAPTER IV**

#### FINDINGS AND DISCUSSIONS

In this chapter the researcher explains his findings from the translation results of machine translators, namely ChatGPT and Google Translate, in comparing the quality of translations in scientific journal translations. Translation quality in translating scientific journals from English to Indonesian in the aspects of accuracy, acceptability and readability.

## A. Findings

Overall, both ChatGPT and Google Translate are quite good in terms of accuracy and acceptability, but still need improvement in the readability aspect so that the translation results are more natural and easy to understand in Indonesian.

This research focuses on the quality of translation results between ChatGPT and Google Translate in translating scientific journals. The quality of the translation is illustrated below:

## a. The quality of ChatGPT in translating scientific journal

Researcher found that from 1 scientific journal, there were 124 sentences. starting from the abstract to the conclusion, the researcher calculated the average values of accuracy, acceptability, readability, and can be seen in the table below:

Table 4.1 Mean Score of ChatGPT

NO	ACCURACY	ACCEPTABILITY	READABILITY
1.	2,2	1,8	1,9

The data above was taken from the formula in table 3.5 in chapter 3 which uses the formula - average

# a. Accuracy

It can be seen from the table above that ChatGPT only scored 2.2. This means that in terms of accuracy, ChatGPT falls into the Less Accurate category, as a minimum score of 2.5 is required to be considered accurate.

According to the indicators of the 'less accurate' category, most of the meanings of words, technical terms, phrases, clauses, sentences, or source text have been accurately transferred into the target language. However, there are still distortions of meaning or ambiguous (vague) translations, or some meanings are omitted, which disrupt the completeness of the message

# b. Acceptability

In the acceptability aspect, ChatGPT only scored 1.8, which means it falls into the Less Accepted category. According to the acceptability indicators, the translation generally feels natural; however, there are minor issues with the use of technical terms or some grammatical errors.

## c. Readability

In the readability aspect, ChatGPT scored 1.9, placing it in the "Middle Readability" category. According to the readability indicators, the translation is generally understandable to the readers; however, there are certain parts that need to be read more than once to fully grasp the translation.

Based on the results above, the researcher calculated the average of accuracy, acceptability, readability based on the formula in table 3.7 in chapter III and found the following results:

$$\underbrace{(2,2 \times 3) + (1.8 \times 2) + (1,9 \times 1)}_{6} = \underbrace{6,6 + 3,6 + 1,9}_{6} = \underbrace{12,1}_{6} = 2,0$$

After calculating using the above formula, ChatGPT achieved an average score of 2.0. This means that ChatGPT performs sufficiently well as a translation engine.

## b. The quality of Google Translate in translating scientific journal

Researcher found that from 1 scientific journal, there were 124 sentences. starting from the abstract to the conclusion, the researcher calculated the average values of accuracy, acceptability, readability, and can be seen in the table below:

Table 4.2 Mean Score of Google Translate

NO	ACCURACY	ACCEPTABILITY	READABILITY
1.	1,9	1,6	1,6

#### a. Accuracy

In the accuracy aspect, Google Translate score 1.9 placing it in the Less Accurate category. According to the indicators of the 'less accurate' category, most of the meanings of words, technical terms, phrases, clauses, sentences, or source text have been accurately transferred into the target language. However, there are still distortions of meaning or ambiguous (vague) translations, or some meanings are omitted, which disrupt the completeness of the message

#### b. Acceptability

Regarding acceptability, Google Translate scored 1.6, indicating that Google Translate falls into the Less Accepted category. According to the acceptability indicators, the translation generally feels natural; however, there are minor issues with the use of technical terms or some grammatical errors.

## c. Readability

For readability, Google Translate scored 1.6, indicating it falls into the 'Middle Readability' category. According to the readability indicators, the translation is generally understandable to the readers; however, there are certain parts that need to be read more than once to fully grasp the translation.

Based on the results above, the researcher calculated the average of accuracy, acceptability, readability based on the formula in table 3.7 in chapter III and found the following results:

$$\frac{(1,9 \times 3) + (1.6 \times 2) + (1,6 \times 1)}{6} = \frac{5,7 + 3,2 + 1,6}{6} = \frac{10,5}{6} = 1,7$$

From the average calculation, Google Translate obtained an average score of 1.7, indicating that Google Translate performs fairly well as a translation engine.

## c. The most significant translation tools based on translation theory

After calculating the averages between ChatGPT and Google Translate, it was found that ChatGPT scored 2.0 and Google Translate scored 1.7. As shown in the table above, the difference between ChatGPT and Google Translate is only 0.3 points. Therefore, both ChatGPT and Google Translate can be categorized as performing reasonably well as translation tools. Please refer to Table 4.3 below:

Table 4.3 The Comparison of ChatGPT and Google Translate ranslation results

NO	ChatGPT		Google Translate			
	ACCURACY	ACCEPTABILITY	READABILITY	ACCURACY	ACCEPTABILITY	READABILITY
1.	2,2 1,8 1,9		1,9	1,6	1,6	
AVERAGE			AVERAGE			
2,0			1,7			

The conclusion shows that both ChatGPT and Google Translate have only slight differences in accuracy, acceptability, and readability. The researcher conclude that ChatGPT and Google Translate perform similarly in terms of accuracy and acceptability,

but both need further evaluation and improvement, particularly in readability, as they translate from source to target language in a less natural manner.

## 1. Accuracy

The accuracy of the translated text referred to here is if the translated text or target language text (TL) is able to convey the same message as that in the source language text (TL). In other words, accuracy in the field of translation quality studies refers to the level of correspondence between SL text and TL text. The concept of equivalence referred to here is the similarity of content or message between the two. A text can be said to be a translation if the SL text has the same meaning and message as the SL text. There are three parameters used to assess the level of accuracy, namely; Accurate (score 3), Less Accurate (score 2), and Inaccurate (score 1). Here are the explanations for each parameter of translation accuracy for ChatGPT and Google Translate in translating scientific journals:

Table 4.4

Examples of translation quality on accuracy aspect from ChatGPT and Google Translate

Translation Machine	Accurate	Less Accurate	Inaccurate
Translation Machine	Sentence 2	Sentence 4	Sentence 72
	SL: The 'knowledge	SL: Two recent	SL: There is,
	turn' in	books address	moreover, a
	curriculum		lack of
		the knowledge	
	studies has	question in very	understanding
	proved highly	different ways.	of the
	influential in the		operation of
	past two		empire itself.
	decades.		
ChatGPT			
	TL: 'Perubahan	TL: Dua buku	TL: Selain itu, ada
	pengetahuan'	terbaru	kurang
	dalam studi	membahas	pemahaman
	kurikulum telah	pertanyaan	tentang
	terbukti sangat	pengetahuan	operasi dari
	berpengaruh	dengan cara	kekaisaran itu
	dalam dua	yang sangat	sendiri.
	dekade terakhir.	berbeda.	507707777
		00.0000	
	Sentence 13	Sentence 10	Sentence 4
	SL: Its	SL : The five authors	SL: Two recent
	multivoicedness	bring to the	books address
	can obviously	study a range of	the knowledge
	be seen as a	different	question in
	strength of this	disciplinary	very different
	study	backgrounds	ways.
	•	and a wealth of	
		experience.	
		on perioneon	
	TL: Sifatnya yang	TL: Kelima penulis	TL: Dua alamat
Google Translate	multisuara jelas	membawa ke	buku terbaru
	dapat dilihat	dalam	pertanyaan
	_		
	sebagai kokuatan	penelitian ini	pengetahuan
	kekuatan	berbagai latar	dengan cara
	penelitian ini	belakang	yang sangat
		disiplin ilmu	berbeda.
		yang berbeda	
		dan banyak	
		pengalaman.	
	t	t	

#### a. Accurate Translation

The qualitative parameters of an accurate translation text are when words, clause phrases, sentences and technical terms in the SL are translated accurately into the SL; without any distortion of meaning in it. but in the final results ChatGPT only found an average of 2.2 and Google Translate 1.9, which is close to a score of 2, namely less accurate (LA). but there are also translations from ChatGPT and Google Translate which have an accurate score of 3 (A).

#### **b.** Less Accurate Translation

The qualitative parameter of a translated text that is less accurate is when most of the words, clause phrases, sentences and technical terms in the SL are translated accurately into the SL; but there is still distortion of meaning or translation of double meanings (taxa) by subtraction or addition, thus disturbing the integrity of the content/message of the SL text.

#### c. Inaccurate Translation

The qualitative parameter of an inaccurate translation text is when words, clause phrases, sentences and technical terms in the SL are translated inaccurately into the SL or many contents/messages from the SL text are omitted in the SL text.

## 2. Acceptability

From the results of the research regarding acceptability, the researcher found that the average result on Chat GPT was a score of 1.8, where to get a score of 3 you must at least get a score of 2.5, therefore ChatGPT only got a score of 2, namely Less Accepted because ChatGPT got a score of 1.8, but in Google Translate, Google Translate got an average score of 1.6 and this also got a score of 2 because it was close to score 2. The following is an explanation of each parameter of the acceptability level of ChatGPT and Google Translate translations in the translation of scientific journals:

Table 4.5

Examples of translation quality on acceptability Aspect from ChatGPT and Google Translate

Translation Machine	Accepted	Less Accepted	Inaccepted
	Sentence 7	Sentence 5	Sentence 49
	SL: But what does	SL: These days, as I	SL : English is thus
	knowledge look	wander around	conceptualised
	like in English?	London	as being
	Two recently	secondary	continually
	published books	schools,	remade in the
	offer	knowledge	classroom, and
	contrasting	seems to be	differently in
	answers to this	everywhere.	different
	question.		classrooms.
ChatGPT	TL: Namun, seperti	TL: Akhir-akhir ini,	TL: Bahasa Inggris
	apa	saat saya	oleh karena itu
	pengetahuan itu	berkeliling di	dikonseptualisa
	dalam Bahasa	sekolah	sikan sebagai
	Inggris? Dua	menengah di	selalu dibuat
	Inggris? Dua buku yang baru	menengah di London,	selalu dibuat ulang di dalam
	Inggris? Dua buku yang baru saja diterbitkan	menengah di London, pengetahuan	selalu dibuat ulang di dalam kelas, dan
	Inggris? Dua buku yang baru saja diterbitkan menawarkan	menengah di London, pengetahuan tampaknya ada	selalu dibuat ulang di dalam kelas, dan berbeda-beda
	Inggris? Dua buku yang baru saja diterbitkan menawarkan jawaban yang	menengah di London, pengetahuan	selalu dibuat ulang di dalam kelas, dan berbeda-beda di kelas-kelas
	Inggris? Dua buku yang baru saja diterbitkan menawarkan jawaban yang kontras	menengah di London, pengetahuan tampaknya ada	selalu dibuat ulang di dalam kelas, dan berbeda-beda
	Inggris? Dua buku yang baru saja diterbitkan menawarkan jawaban yang	menengah di London, pengetahuan tampaknya ada	selalu dibuat ulang di dalam kelas, dan berbeda-beda di kelas-kelas

Google Translate	Sentence 59 SL: Where Literary Knowing is less convincing is in its presentation of broader historical and political contexts within which the research might be situated.	Sentence 92 SL: It is this emphasis that infuses the book with a heartening optimism.	Sentence 65 SL: A broad-brush approach characterises much of this account of the history of literary study.
	TL: Yang kurang meyakinkan dalam Literary Knowledge adalah penyajian sejarahnya yang lebih luas dan konteks politik di mana penelitian tersebut ditempatkan.	TL: Penekanan inilah yang menanamkan buku ini dengan semangat optimisme.	TL: Pendekatan yang luas menjadi ciri sebagian besar kisah sejarah sastra ini belajar.

## a. Accepted Translation

The qualitative parameter of an acceptable translated text is when the translation results feel natural; the structure of words, clause phrases and sentences contained in the translated text is in accordance with the rules that apply in the target language, and the terms used are also common and familiar to the target reader's ears. However, in the final results the average ChatGPT only got a score of 1.8 and Google Translate is 1.6 and this is

close to score 2, namely Less Accepted and there are also Chat GPT and Google Translate chat translation results which show Accepted results.

## **b.** Less Accepted Translation

The qualitative parameter of a translated text that is less acceptable is when the translation results generally feel natural, but the grammatical structure contained in the translated text is not in accordance with the rules that apply in the target language, and the terms used are also less common and unfamiliar to the audience

## c. Inaccepted Translation

The qualitative parameters of an unacceptable translated text are when the translation results feel unnatural, the grammatical structure contained in the translated text is not in accordance with the rules that apply in the target language, and the terms used are also unusual and unfamiliar to the target reader's ears.

#### 3. Readability

The readability aspect in assessing translation quality refers to the level of ease of a translated text to be understood by the target reader. The readability aspect has three levels, namely; High Readability (score 3), Medium Readability (score 2), and Low Readability (score 1). From the results of research regarding chat readability, Chat GPT only found an average score of 1.9 and Google Translate only found an average score of 1.6. From the average score that was found by the researchers, the scores were both low and only close to score 2, where the results of the scientific journal translation research between ChatGPT and Google Translate only got score 2, namely Middle Readability. The following is an

explanation of each parameter of the readability level of ChatGPT and Google Translate translations in the translation of scientific journals:

Table 4.6

Examples of translation quality on Readability aspect from ChatGPT and Google Translate

Translation Machine	Hight Readability	Middle Readability	Low Readability
Translation Waterinic	Sentence 2	Sentence 92	Sentence 72
	SL: The 'knowledge	SL: It is this	SL: There is,
	turn' in	emphasis that	moreover, a
	curriculum	infuses the	lack of
	studies has	book with a	understanding
	proved highly	heartening	of the operation
	influential in	optimism.	of empire itself.
	the past two		
	decades.		
ChatGPT			
	TL: 'Perubahan	TL: Penekanan	TL: Selain itu, ada
	pengetahuan'	inilah yang	kurang
	dalam studi	menyemangati	pemahaman
	kurikulum telah	buku tersebut	tentang operasi
	terbukti sangat	dengan	dari kekaisaran
	berpengaruh	optimisme yang	itu sendiri.
	dalam dua	menggembiraka	
	dekade terakhir.	n.	
	Sentence 72	Sentence 93	Sentence 65
	SL :There is,	SL :Along the way,	SL: A broad-brush
	moreover, a	The Trouble	approach
	lack of	with English	characterises
	understanding	contains some	much of this
	of the operation	acute diagnoses	account of the
	of empire itself.	of current ills	history of
	•		· ·
			literary study.
Google Translate	TL: Terlebih lagi,	TL: Sepanjang	TL: Pendekatan
	terdapat	jalan, The	yang luas
	-		menjadi ciri
	kurangnya	i rounte with	meniaai ciri
	kurangnya pemahaman	Trouble with Fnolish berisi	· ·
	pemahaman	English berisi	sebagian besar
	pemahaman tentang cara	English berisi beberapa	sebagian besar kisah sejarah
	pemahaman tentang cara kerja kerajaan	English berisi beberapa diagnosis akut	sebagian besar kisah sejarah sastra ini
	pemahaman tentang cara	English berisi beberapa diagnosis akut dari penyakit	sebagian besar kisah sejarah
	pemahaman tentang cara kerja kerajaan	English berisi beberapa diagnosis akut	sebagian besar kisah sejarah sastra ini

#### a. High Readability

To determine the high level of readability, the parameter used is when words, phrases, clauses, sentences, technical terms or translated text are easily understood by the target reader with just one read. In the readability section of the ChatGPT, the average value was only 1.9 and Google Translate. 1.6 and this is close to a score of 2 so the researchers found that the readability of ChatGPT and Google Translate is the same as Middle Readability.

#### b. Middle Readability

To determine the readability level in the medium category, the qualitative parameters used are when in general the translated text can be understood by the target reader, but there are certain parts in the translated text that must be read more than once to understand the meaning.

## c. Low Readability

The qualitative parameters used to determine the quality of a translation with a low readability level are words, phrases, clauses, sentences, terms.

technical texts or translations cannot be understood by the target reader.

## **B.** Discussion

The quality of a translation is determined by the extent to which the translation produces the same impact on the target reader as the original text had on the source reader. Nida emphasizes the importance of dynamic equality, where the focus is on acceptability and clarity for the target audience<sup>55</sup>

As previously explained, researcher used document analysis to analyze data assessed by rater, and it was found that the researcher analysis results similar with the rater analysis results.

# A. The quality of ChatGPT in Translating scientific journal

In terms of accuracy, ChatGPT scored 2.2 (Less Accurate), for acceptability 1.8 (Less Accepted), and for readability 1.9 (Middle Readability). When all these scores are averaged, ChatGPT receives an average score of 2.0, categorizing it as fairly good in translating scientific journals. However, to be categorized as good, ChatGPT needs to achieve an average score of 2.5. Nevertheless, in the study by Rusmita Aeni et al., titled "The Accuracy of ChatGPT in Translating Linguistic Texts in Scientific Journals," it was stated that ChatGPT achieved an accuracy rate of 93.6%. However, based on the results and analysis of 124 data points from scientific journals by the researcher, the average accuracy score was only 2.2, which can be categorized as Less Accurate. According to the theory by Nababan, Nuraeni, & Sumardiono, the quality of a translation should be assessed using three main parameters: accuracy, acceptability, and readability. 57

As stated by Juliane House, translation quality assessment can be understood as the process of evaluating the quality of a translation. This process often involves comparing the translation with the source text and evaluating it based on various criteria such as

<sup>&</sup>lt;sup>55</sup> Nida, E. A., & Taber, C. R. (1982). *The Theory and Practice of Translation*. Brill.

<sup>&</sup>lt;sup>56</sup> Rusmita Aeni et al. 2024 "the accuracy of cht gpt in translating linguistic texts in scientific journals"

<sup>&</sup>lt;sup>57</sup> Nababan, M. R., Nuraeni, A., & Sumardiono. (2012). *Pengembangan Model Penilaian Kualitas Terjemahan. Kajian Linguistik dan Sastra*, 24(1), 39-57.

accuracy, fluency, and suitability for the target audience. This is supported by Larson's opinion that the quality of a translation depends on three main criteria: accuracy, acceptability, and readability.<sup>58</sup> According to him, a good translation must correspond to the source text (accuracy), be acceptable in the target language and conform to cultural and linguistic norms (acceptability), and be easy to read and understand by the target audience (readability).

## B. The quality of Google Translate in Translating scientific journal

Google Translate scored 1.9 (Less Accurate) in terms of accuracy, 1.6 (Less Accepted) in terms of acceptability, and 1.6 (Middle Readability) in terms of readability. When averaged, Google Translate received an overall score of 1.7, categorizing it as fairly good in translating scientific journals. These results are consistent with the findings of Irawati Br Munthe in the study "Comparing Translation Accuracy Between Google Translate and Professional Translators," which stated that the accuracy of Google Translate achieved an average score of 2.36, which is not considered accurate, as a minimum average score of 2.5 is required for the accurate category. Both studies categorized the accuracy aspect as Less Accurate because, according to the qualitative parameter, an accurate translation is one where words, phrases, clauses, sentences, and technical terms in the source language are accurately translated into the target language without any distortion of meaning. This

<sup>58</sup> Larson, M. L. (1984). *Meaning-Based Translation: A Guide to Cross-Language Equivalence*. University Press of America.

<sup>&</sup>lt;sup>59</sup> Irawati Br Munthe et al., 2023 'Comparing Translation Accuracy Between Google Translate and Professional Translators.'

is supported by the theory of Nababan, M. R., Nuraeni, A., & Sumardiono, 60 who stated that accuracy, acceptability, and readability are the three main aspects that must be fulfilled to achieve high-quality translations. All three must be balanced by the translator to produce translations that are not only accurate in conveying meaning but also natural and easy to understand for the target audience.

#### C. The most significant translation tools based on translation theory

Both translation tools, ChatGPT and Google Translate, have an overall average score difference of only 0.3 points. In terms of accuracy, ChatGPT scored 2.2, while Google Translate scored 1.9, resulting in an accuracy difference of just 0.3 points. In terms of acceptability, ChatGPT scored 1.8, and Google Translate scored 1.6, with a difference of only 0.2 points. For readability, ChatGPT scored 1.9, and Google Translate scored 1.6, showing a readability difference of only 0.3 points.

Therefore, it can be concluded that both tools fall into the Less Accurate category for accuracy, the Less Accepted category for acceptability, and the Middle Readability category for readability. Overall, both ChatGPT and Google Translate are fairly good at translating scientific journals. However, in terms of readability, both tools need improvement to make the translations more natural and easier to understand in the target language.

This study aligns with the research by Lucía Sanz-Valdivieso & Belén López-Arroyo titled "Google Translate vs ChatGPT: Can non-language professionals trust them for

58

<sup>&</sup>lt;sup>60</sup> Nababan, M. R., Nuraeni, A., & Sumardiono. (2012). *Pengembangan Model Penilaian Kualitas Terjemahan. Kajian Linguistik dan Sastra*, 24(1), 39-57.

custom translations?"<sup>61</sup> which states that ChatGPT made fewer terminological errors compared to Google Translate. Based on the data, the accuracy difference is only 0.3 points, the acceptability difference is only 0.2 points, and the readability difference is only 0.3 points. Therefore, it can be concluded that ChatGPT is slightly superior to Google Translate, but both are fairly good at translating scientific journals.

According to Newmark, there are two main approaches to translation: semantic translation and communicative translation.<sup>62</sup> Newmark emphasizes that a quality translation must consider the cultural context and idioms of the target language to achieve a balance between accuracy and acceptability. He also stresses that translations must remain faithful to the meaning and message of the source text while maintaining readability for the target reader.

This is supported by Larson's theory<sup>63</sup>, which argues that translation quality depends on three main criteria: accuracy, acceptability, and readability. According to him, a good translation must be faithful to the source text (accuracy), acceptable in the target language according to cultural and linguistic norms (acceptability), and easy to read and understand by the target reader (readability).

\_

<sup>&</sup>lt;sup>61</sup> Lucía Sanz-Valdivieso & Belén López-Arroyo 2023 "Google Translate vs ChatGPT: Can be non-language professionals trust them for custom translations?"

<sup>&</sup>lt;sup>62</sup> Newmark, P. (1988). A Textbook of Translation. Prentice Hall.

<sup>&</sup>lt;sup>63</sup> Larson, M. L. (1984). *Meaning-Based Translation: A Guide to Cross-Language Equivalence*. University Press of America.

### **CHAPTER V**

### **CONCLUSION AND SUGGESTION**

In this chapter there are two parts that the researcher wants to convey, namely conclusions and suggestions. The conclusions below are answers to the researcher's questions, while the suggestions are intended to provide information to readers who are interested in conducting further research in this field.

### A. CONCLUSION

Based on the findings and discussions in the previous chapter, the researcher analyzed the translation quality based on three aspects: accuracy, acceptability, and readability. It was found that ChatGPT is slightly superior to Google Translate, but only by an overall average score difference of 0.3 points. ChatGPT scored an average of 2.0, while Google Translate scored 1.7. For accuracy, ChatGPT scored 2.2 and Google Translate 1.9, with a difference of only 0.3 points. In terms of acceptability, ChatGPT scored 1.8 and Google Translate 1.6, with a difference of only 0.2 points. In terms of readability, ChatGPT scored 1.9 and Google Translate 1.6, with a difference of only 0.3 points.

However, based on the above data, the differences between them are minimal, and both are fairly good at translating scientific journals. Nonetheless, the readability aspect needs improvement as both are still less natural in this aspect, indicating the need for further enhancement to ensure that translations are more comprehensible in the target language.

#### **B. SUGGESTION**

After conducting tests in comparing the translation results and seeing the quality of the two translation machines, the researcher would like to provide several suggestions that may be useful for:

- 1. Contribution to Academic Literature: This research can produce a deeper understanding of the comparison between Chat GPT and Google Translate systems in translating scientific journals. This could be a valuable contribution to the translation and natural language processing literature.
- 2. Method Development: Students can develop skills in designing and carrying out scientific experiments related to translation technology. This helps in expanding their knowledge of research methodology.
- 3. Practical Relevance: This research can provide practical insight to lecturers and students about the strengths and weaknesses of each translation system in the specific context of scientific journals. This information can be used to select appropriate translation systems in various academic contexts.
- 4. Use of the Latest Technology: Lecturers and students can broaden their understanding of the latest technology applications such as Chat GPT in the context of scientific translation. This helps in improving technological skills and adaptation to new innovations in the field of translation.
- 5. Discussion and Further Study: The results of the research can become the basis for further discussions in class or in research groups, allowing for an in-depth exchange of opinions and thoughts on the role of technology in the8transformation of translation.

Thus, this research can provide substantial benefits for lecturers and students in expanding their academic knowledge as well as making a meaningful contribution to the field of translation and natural language processing studies.

### REFERENCES

- A. Widyamartaya, Seni Menerjemahkan, Kanisius, Yogyakarta: 2003 P.11
- Ahmad Maher Nakhallah, Difficulties and Problems Facing English Students at QOU in the Translation Process from English to Arabic and Their solutions, Al-Quds Open University
- American Medical Association. (2019). AMA Manual of Style: A Guide for Authors and Editors (11th ed.). New York, NY: Oxford University Press.
- ames H. McMillan dan Sally Schumacher, Research in Education: A Conseptual introduction (New York: Longman, cet.4, 2001), h. 38.
- APA Style. (2019). Publication manual of the American Psychological Association (7th ed.). Washington, DC: American Psychological Association
- Bahdanau, D., Cho, K., & Bengio, Y. (2019). "Neural Machine Translation by Jointly Learning to Align and Translate." In ICLR.
- Brown, T. B., Mann, B., Ryder, N., Subbiah, M., Kaplan, J., Dhariwal, P., ... & Agarwal, S. (2020). Language Models are Few-Shot Learners. *Advances in Neural Information Processing Systems*, 33.
- Bungin, B. (2017). Qualitative Research Methods: Methodological Actualization towards Various Contemporary Variants. Prenadamedia Group.
- Burhan Bungin, Analisis Data Penelitian Kualitatif, ed. 1-8, (Jakarta: Rajawali Pers, 2012), h. 85.
- Council of Science Editors. (2021). Scientific Style and Format: The CSE Manual for Authors, Editors, and Publishers (8th ed.). Chicago, IL: University of Chicago Press.
- Eryanto, Analisis Isi Pengantar Metodeologi Penelitian Ilmu Komunikasi dan Ilmu Sosial Lainnya, Cet. 2 (Jakarta: Penerbit Kencana Prenda Media Group, 2010), h. 11.
- Harris Hermansyah Setiajid et al. 2023"Evaluating The Accuracy Of Google Traslate And Chat GPT In Windows 11 Education Traslations Installation GUI Text In Indonesia: Component eror Category Application"
- Hassan, H., Aue, A., Chen, C., Chowdhary, V., Clark, J., Federmann, C., ... & Zhou, J. (2020). "Achieving Human Parity on Automatic Chinese to English News Translation." In Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics.
- House, Juliane. Translation Quality Assessment: Past and Present. Routledge, 2015.
- Hutchins, J. (1995). Machine Translation: Past, Present, Future. Ellis Horwood.
- Irawati Br Munthe et al., 2023 'Comparing Translation Accuracy Between Google Translate and Professional Translators
- Irawati Br Munthe et al., 2023 'Comparing Translation Accuracy Between Google Translate and Professional Translators.'
- Jakobson, R. (1959). On Linguistic Aspects of Translation. In R. A. Brower (Ed.), *On Translation* (pp. 232-239). Harvard University Press.
- Jeremi Munday, Op.Citp.40
- Koehn, P. (2010). Statistical Machine Translation. Cambridge University Press.
- Larson, M. L. (1984). *Meaning-Based Translation: A Guide to Cross-Language Equivalence*. University Press of America.

- Lawrance, Venuti. The Translation studies reader. Roudledge, New York: 2000. P 114
- Lucía Sanz-Valdivieso & Belén López-Arroyo 2023 "Google Translate vs ChatGPT: Can be non-language professionals trust them for custom translations?"
- Melby, A. (1995). The Possibility of Language: A Discussion of the Nature of Language, with Implications for Human and Machine Translation. John Benjamins Publishing.
- Miles, M. B., & Huberman, A. M. (1994). Qualitative Data Analysis: An Expanded Sourcebook (2nd ed.). SAGE Publications
- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). Qualitative Data Analysis: A Methods Sourcebook (3rd ed.). SAGE Publications.
- Modern Language Association. (2020). MLA Handbook (8th ed.). New York, NY: Modern Language Association of America.
- Mona Baker, In Other Word: A course Book On Translation, Routledge, London: 1992, p21-25
- Nababan et al., 2012 The Analysis of the Results of Acceptability on the Translation Results in the Unedited Version and Edited Version in the Novel "After You"
- Nababan, keterkaitan antar latar belakang penerjemah dengan proses penerjemahan dan kualitas terjemahan, Surakarta: PPs Universitas Sebelas Maret, 2004 P. 54
- Nababan, M. R., Nuraeni, A., & Sumardiono. (2012). *Teori terjemahan: Pengantar ke dalam bidangnya*. Yogyakarta: Pustaka Pelajar.
- Nababan, M.R., Nuraeni, A., & Sumardiono. "Pengembangan Model Penilaian Kualitas Terjemahan." Kajian Linguistik dan Sastra, vol. 24, no. 1, 2012, pp. 39-57
- Newmark, P. (1988). A Textbook of Translation. Prentice-Hall International.
- Nida, E. A., & Taber, C. R. (1982). The Theory and Practice of Translation. Brill.
- Reed, J., & Baxter, A. (2020). *Publishing Journal Articles*. In C. Broughan & J. Reed (Eds.), *Developing Research Writing: A Handbook for Supervisors and Advisors* (pp. 68-81). London: Routledge.
- Rusmita Aeni et al. 2024 "the accuracy of cht gpt in translating linguistic texts in scientific journals"
- Sari Wahyuni, Qualitative Research Method: Theory and Practice, (Jakarta: Salemba Empat, 2012), h. 122.
- Somers, H. (2003). *Computational Linguistics and Machine Translation*. John Benjamins Publishing.
- Suhendra Yusuf, Teori Terjemah (Pengantar ke Arah Pendekatan Linguistik dan Sosiolinguistik).Mandar Maju, Bandung:1994, p.8
- Suhendra, Yusuf. Teori Terjemah. Mandar maju
- Thorp, H. H. (2023). ChatGPT is fun, but not an author. *Science*, *379*(6630),313-313.
- Vaswani, A., et al. (2017). "Attention is All You Need." Proceedings of Advances in Neural Information Processing Systems (NeurIPS).
- Vaswani, A., Shazeer, N., Parmar, N., Uszkoreit, J., Jones, L., Gomez, A. N., ... & Polosukhin, I. (2019). "Attention is All You Need." In Advances in Neural Information Processing Systems.
- Venuti, L. (1995). The Translator's Invisibility: A History of Translation. Routledge.
- Vermeer, H. J. (1989). Skopos and Commission in Translational Action. In A. Chesterman (Ed.), *Readings in Translation Theory* (pp. 173-187). Oy Finn Lectura Ab.

Widyamartaya, Op.Cit.p.15

Widyamartaya., Op.cit. P. 2

Wilks, Y. (1992). Machine Translation: Its Scope and Limits. Springer.

Wu, Y., Schuster, M., Chen, Z., Le, Q. V., Norouzi, M., Macherey, W., ... & Klingner, J. (2021). "Google's Neural Machine Translation System: Bridging the Gap between Human and Machine Translation." *Transactions of the Association for Computational Linguistics*, 5, 339-351.

Zhai, X. (2022). ChatGPT user experience:Implications for education. *Available at SSRN4312418*.

A

P

P

 $\mathbf{E}$ 

N

D

I

X

E

S

### **Appendix 1. SK Pembimbing**



Meninthing

### KEMENTERIAN AGAMA REPUBLIK INDONESIA INSTITUT AGAMA ISLAM NEGERI CURUP

FAKULTAN TARBIYAH

Alema Jalan Dil. A.K. Gool No. I Kook Fox 100 Compulengiside Letre. (0732) 2401.0

Tm. 0732) 21010 Januaryan Bira/Messakananya.a.i.d k. Mad. admin@laincanc.ac.id

Natur - 15 Dens 2514

		Tiestang	
PERDING.	KAN PEMERMIKANG	FDAN 2 DALAM TENUETSAN SKI	MEN'S
	March Street & Street Co. Co. Co.	Committee of the commit	461.00

INSTITUT AGAMA ISLAM NEGERI CURUP

Masgagar

Perganuan Proprietativa des Peretroses Progrem Digitima, Serjana des Percarana Co-Perganuan Tingal.

Lépations: Menteri Apenia 31 Norres 1819/36/3-8/02/522, tanggal 18 April 2022 rassiang.

Pergangkatan Reli or FAIN Comp Percede 2022 - 2026.

Lépations: Division Jenderal Produktion Intern Norme: 1314 Tables 2016. Tanggal 21

Altober 2016 camang John Petrodengarana Meganat Tricki pada Progrem Serjana 3/TALIS

Comp.

Court

16. September: Récour FAIN Coing 0.564 is 34.00 K.P.67.6.70 2003 sanguel 20 September 200 Memperhaches 1

#### MEMUTUSKANT

Meremphan

Mecca

Keemper

Or. Salout Ambort, S.Pd., M.Here Meli Faustah, M.Fd.

19811020 200604 1 992 19940523 202612 2 993

Consectionities Agasta Ivano Negeri (IAIN) Centra trating scaning, solvego: Petricioting & dos II colum provision stripti realization;

NAMA Hubib Halam NIM 20551023

PUDDL SKRIPSI

FLIDUI, SKRIPSI The Comparison of Translations Product using Chair GPT and MMT in Translating Scientific Journals Proposition of Comparison of Comparison Studential Studential

Perdandang i beringan erzentenden skepa:

Perdandang i beringan erzentendeng dan renegerabkan habbat pang terdandan dengan sebanani ian hamin dengan beringan dengan beringan berindan perdanan pang berinkan.

Robins

Kreenn

herbale:

Seer Kepatonen ini chieropaikan kepada yang tersangkutan antuk diketubul idan dilakumakan setingarmana manereja.

Kepatonen ini berbalu nelih dismasken dan berakhe antudah skepal serabul disputahan antudah idan Carp dan masa kisah ngan idah serenapai li uman sejan 5k ini dibengkan; dapikan terdapai skepatonen datam seras kerasuman ini, akan diperhakai sebagaianama mendapa serasa penganan yang berfa kari Kengan.

Disempkon di Carup. Phia maggad 2 kini 2024 Pelom.

## Appendix 2. Kartu Bimbingan Skripsi 1

		KARTU BIMBINGAN SKRIPS	1
DOS DOS JUD MUL	OGRAM STUD CULTAS SEN PEMBIMI SEN PEMBIMI UL SKRIPSI	BING I Dr. Sarus Anchor S. pd. 1. M. Hum BING II Men fourth Mips.  The Compositor of translations get and Nant in translating seis	broduct civing tho
150191	IR BIMBING	IN [2]	04045
NO 1.	TANGGAL	MATERI BIMBINGAN	PARAF PEMBIMBING
		Meralli bab 1,2, dan 3	18-
2.	4	Mororiti bab 1,2, Jan 3	8
3.		Morryisi bab 1,2, Jan 3	2
4.	in substitution	Morroviti bab 1,2, Jan 3	8
5.		Acc bob 1-3	2
6.		Revisi bob 4	200
7.	- 900	Revitt bab 4	2
8.	16,000		53
9.		Krvin bob 4	
0.	-	Acc Bab 4	5/3
1.		Rmini bab 5	9 4
27		Rovini bab 1-1. abition idil	8
2	No. of Participal	Acc 606 1-1, 061/106, J11	2

# Appendix 3. Kartu Bimbingan Skripsi 2

BELA	KANS		KARTU BIMBINGAN SKRIPSI		
NAMA NIM PROGRAM STUDI FAKULTAS PEMBIMBING I PEMBIMBING II JUDUL SKRIPSI			Hobib Harim 2011023  Tatist Bahara Inggin Tartist Bahara Inggin Tartist B.  Di Sazen Anchori is pl 1, M. Hum  Mpii Fauziah, M. pl.:  The Companion of Translation + product Using Charges and Nort in teanslating Scientific journal.		
	AI BIMBINGA IR BIMBINGA				
NO	TANGGAL		MATERI BIMBINGAN	PARAF PEMBIMBING II	
1.		More	vi81 Bab 1, 2, Jan 3	MIL .	
2.		Moreviti Bab 1,2, Jan 3		puld.	
3.		100000000000000000000000000000000000000	prist 805 1,2, Jan 3	mit-	
4.			priti 18ab 1,2, Jon 3	DAN D	
5.		Ace Bab 1-3		husz	
6.		Review Rob 4		Mud	
7.		Rovini Rob 4		Mide	
8.	(Della Co		iri Kaby	inde	
9.			Rot 4	Muf-	
10.		Kon	iti kost	INID-	
11.		Ros	ili Rob 1-t abitanidii	Muld	
12.		Aec	Rob let abition will	MI	
CAMI SUDD CURU	P PEMBIM	BING I,	CURUP, L		

## Appendix 4. Kesimpulan Penilaian Kualitas Hasil Terjemahan

## Keakuratan (Accuracy):

- Hasil terjemahan dengan menggunakan CHAT GPT kebanyakan mendapat skor antara 2 dan 3, yang artinya cukup akurat meskipun masih terdapat beberapa kesalahan di dalamnya.
- Hasil terjemahan dengan menggunakan Google Translate juga mendapatkan skor serupa dengan CHAT GPT, dengan adanya beberapa hasil terjemahan yang kurang akurat.

## Keberterimaan (Acceptability):

• Untuk aspek keberterimaan, baik CHAT GPT maupun Google Translate ratarata mendapat skor 2. Hasil terjemahannya bisa diterima, tapi ada beberapa bagian yang terasa kurang natural atau agak kaku dalam bahasa Indonesia.

## Keterbacaan (Readability):

• Aspek keterbacaan hasil terjemahan dengan menggunakan CHAT GPT dan Google Translate bervariasi, dengan skor antara 1 sampai 3. Hasil terjemahan dari CHAT GPT sedikit lebih baik di beberapa bagian dengan skor keterbacaan mencapai 3, sementara Google Translate sering kali mendapat skor 1, yang mengindikasikan bahwa terdapat cukup banyak bagian yang sulit dipahami oleh pembaca bahasa target (bahasa Indonesia).

## **Kesimpulan Umum:**

 Secara keseluruhan, baik CHAT GPT maupun Google Translate cukup baik dalam aspek keakuratan dan keberterimaan, tapi masih perlu perbaikan di aspek keterbacaan supaya hasil terjemahannya lebih natural dan mudah dipahami dalam bahasa Indonesia.

Curup, 30 Juni 2024

Rater

Rizki Indra Guci, M.Pd.





Habib Hakim is the author of this thesis. He was born in Curup, Rejang Lebong, on February 4, 2002. He is the eldest of three siblings, born to Mr. Topan Hidayat and Mrs. Welly Angreni. The author began his education at Alqur'an Rabbi Radhiyya Kindergarten, graduating in

2008. He then continued his education at SDN 09 Curup Tenggah, Rejang Lebong, graduating in 2014. Following this, he attended SMPN 01 Curup Kota, Rejang Lebong, and graduated in 2017. He pursued his high school education at SMAN 03 Curup Utara, Rejang Lebong, majoring in science, and graduated in 2020.

The author furthered his studies at IAIN Curup, choosing to major in English. During his time at the university, he was an active member of HMPS, FORMADIKSI, and an external organization, HMI. With determination and perseverance, the author completed this thesis and earned his bachelor's degree (S.Pd.).

Lastly, the author would like to express his deepest gratitude for the completion of this thesis, titled "The Comparison of Translation Products Using ChatGPT and Google Translate in Translating Scientific Journals." It is hoped that this final project will contribute to the field of education.