

Errors Classification in Google Translate when Rendering Batak Cultural Terms into English**Sunarti Desrieny Tambunan**

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Abstract: This research aims to identify the errors that Google Translate make when rendering Batak Toba culturally specific terms into English in five selected articles. Qualitative research was applied to analyze the translated terms from the Batak language into English. The result showed that there were 3 data of orthography (errors in capitalization (2), and spelling (1)), 1 data of lexis level (errors in addition (1)), 4 data of semantic level (errors in choice (3) and confusion of senses (1)), 8 data of discourse to analyze the translation of Batak terms level (under should not be translated (7)). Thus, the total number of data errors found was 15. No data were found at the grammar level.

Keywords: brand awareness; digital promotion; Instagram; Gallery RJ; social media marketing.

INTRODUCTION

Hatim and Munday (2004) stated that translation concerns both the process and the result (product). The process here focuses on when a translator takes the original or source text (ST) and turns it into a text in another language (the target text, TT). Then the product is the concrete translation result produced by the translator. In other words, in translation, a translator should master two or more different languages. This mastering will lead to a good result as translation must be done comprehensively. It is not only about language; multiple dimensions must be taken into consideration, such as language, culture, context, and communicative functions. Hence, the process of transferring information, meaning, and function can be achieved effectively (Li, 2026).

In this era, technological advancements are highly sophisticated. Any information we need can be obtained instantly. Languages are also spread worldwide, with hundreds of language families and thousands of distinct languages. In addition, this variety could create a gap between one country and another. In this day and age, the field of machine translation has evolved rapidly (Naveen & Trojovsky, 2024). Thus, this gap is no longer an issue because technology provides tools to translate from the original language into the target language. One of the tools is called Google Translate.

Google Translate, or Google Neural Machine Translation (GNMT), is one of the most widely used machine translation tools at the moment. It offers instant translation for hundreds of languages worldwide (Sadikhova & Babayev, 2025; Koehn, 2010). Many users are satisfied with the accuracy of the translation results. Naveen & Trojovsky (2024) also stated that the recent advancements in machine translation have focused on enhancing the accuracy, efficiency, and contextual understanding of machine translation models. However, the result or product produced by a machine translation cannot be compared to

humans'. One field that machine translation (Google Translate) struggles with is idiomatic expressions in the original languages, which cannot be translated semantically into the target language (Majji, Ampalam, Raju, 2025; Naveen & Trojovsky, 2024). The result often leads to incorrect translation or errors. Other examples are domain-specific terminology and cultural words.

Errors found in a machine-translated text can be studied through error analysis by identifying and classifying them (the errors) (Stymne & Ahrenberg, 2012). The identification and classification of the errors will be based on Costa et al (2015). They classified the errors into five categories, they are (1) Orthography (punctuation, capitalization, and spelling), (2) Lexis level (omission, addition and untranslated errors), (3) Grammar level (misselection errors and misordering errors), (4) Semantic level (confusion of senses, wrong choice, collocational error and idioms), and (5) Discourse level (style, variety and should not be translated).

Several researchers have conducted research on the same topic. Sadikhova & Babayev (2025) explored the limitations and challenges of using Google Translate as a translation tool, particularly in academic, professional, and literary contexts, using a qualitative approach. In their research, their samples are in English, and their translation results into several different languages, as well as the back-translation produced by Google Translate. Their findings highlighted that Google Translate is still struggling to translate grammar, idiomatic expressions, cultural nuances, and subject-specific terminology. Kanoko & Sutrisno (2024) discussed the results of a linguistic evaluation of the output of social media machine translation for news headlines, using a qualitative approach. The finding showed that various linguistic non-equivalences were found in the social media auto-translate output.

Every culture in this world is unique and “complex” (Tylor, 1871). It includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society. Nowadays, people can learn about different cultures online. Many websites provide information about one country and its culture. One of them is National Geographic Indonesia. Satisfyingly, this online magazine covers Batak culture. Another website is WordPress. Because National Geographic Indonesia does not provide issues about traditional stories, such as myths in Batak culture. Therefore, the researcher selected random websites containing Batak traditional stories. In terms of translation, human translators are easy to detect cultural terms. These terms cannot be translated literally. As a result, they will seek the best strategy to render the terms as accurately as possible into the target language. However, machine translation relies on probability to translate words or phrases. Thus, the results of the translations may be erroneous. Based on this background, this research aims to identify the errors that Google Translate make when rendering Batak Toba culturally specific terms into English. The culturally specific terms are identified based on Newmark's (1988) theory, which comprises five categories. They are ecology, material culture, social culture, organizations, customs, activities, procedures, concepts, and gestures, and habits.

RESEARCHMETHOD

Qualitative research is a scientific research methodology that prioritizes depth and contextual relevance, including the portrayal of viewpoints, in understanding social phenomena (Lim, 2025). During the process, the researcher ensures a thorough exploration in the analysis. The data to be explored and analyzed are drawn from five selected articles that contain Batak Toba culturally specific terms and their translations using Google Translate. Three articles are taken from National Geographic Indonesia: "Menilik Lebih dalam Tradisi Mardoton, Budaya Tangkap Ikan Warisan Leluhur di Danau Toba (posted on 29 December 2021)", "Andaliman, Merica Batak yang Kaya Manfaat dan Bernilai Tinggi (posted on 24 July 2021)", and "Kuasa Sejagat, Siapa Batara Guru di Mitologi Batak, Jawa, dan Bugis? (posted on 29 December 2023)". The fourth article was taken from a community website called Aliansi Masyarakat Adat Nusantara entitled "Legenda Hau Sisada-sada, Pohon Berumur Ratusan Tahun di Tano Batak (posted on 25 June 2026)". The fifth article was taken from a WordPress entitled "Cerita si Boru Tumbaga (posted on 22 May 2009)".

The data collected are words, phrases, and sentences that contain Batak Toba culturally specific terms. The original language of the articles is Indonesian, and the target language is English. The translation results are produced by Google Translate. After collecting the data, the researcher identifies the errors and classifies them based on Costa et al (2015).

RESULTS AND DISCUSSION

Result

This research aimed to identify the errors that Google Translate make when rendering Batak Toba-specific cultural terms into English in five selected articles. The result showed that there were 3 data of Orthography (errors in capitalization (2), and spelling (1)), 1 data of Lexis level (errors in addition (1)), 4 data of semantic level (errors in choice (3) and confusion of senses (1)), 8 data of Discourse level (under should not be translated (7)). Thus, the total number of data errors found was 15.

Discussion

Orthography level errors

This level of errors includes all errors concerning the misuse of punctuation and the misspelling of words when Machine Translation, such as Google Translate, translates the original language into the target language. There are three types of errors in this level: punctuation, capitalization, and spelling. In this research, one sample of a spelling mistake and two samples of capitalization errors were found.

A spelling mistake

In a Machine Translation like Google Translate, a spelling mistake concerns the substitution, addition, or deletion of one or more letters (or an accent) to the orthography of a word from a source language into the target language. In the following example, the culturally specific term found is “*mi gomak*”. It is a Batak traditional spicy noodle dish. Google Translate translates this term as “*mie gomak*” with additional information in parentheses, “*gomak noodles*” in the target language. In this case, the word “*mi*” is an identical cognate. In other words, the Batak Toba language and Indonesian share the exact same spelling and meaning. This leads Google Translate to successfully find that the term “*mi*” is equivalent to “*noodles*” in the target language. However, an error was found in terms of spelling. The word “*mi*” in the source language is translated by Google Translate into “*mie*” in the target language. The letter “*e*” is added.

Datum 1

Source Language

Beberapa masakan khas Batak yang menggunakan andaliman sebagai penyedapnya, seperti arsik ikan mas (ikan mas rebus dengan bumbu kuning kaya rempah), naniura (sajian ikan mentah yang direndam dalam air jeruk purut dan rempah), saksang (gulai babi khas Batak), dan mi gomak.

(Source: *Andaliman, Merica Batak yang Kaya Manfaat dan Bernilai Tinggi*)

Target Language

Several Batak dishes use andaliman as a flavoring, such as *arsik ikan mas* (boiled carp in a rich yellow spice sauce), *naniura* (raw fish marinated in kaffir lime juice and spices), *saksang* (Batak pork curry), and *mie gomak* (*gomak noodles*).

A capitalization error

In a Machine Translation like Google Translate, a capitalization error occurs when there is an inappropriate use of capital letters (for instance, the use of a small caption in the first letter of a proper noun) when the tool translates the source text into the target text. In the following example, the culturally specific term found is “*Bulan Sipaha Sada*”. This term appears in the Batak astrological calendar, meaning the first month. It can be seen that the first letter of each word is uppercase. As a result of the translation, Google Translate translates it into “*the month of Sipaha Sada*” in the target text. It can be seen that the word “*Bulan*” is translated into “*month*”. In this case, the word “*bulan*” is an identical cognate. In other words, the Batak Toba language and Indonesian share the exact same spelling and meaning. The result of the Google Translate translation at the end uses lowercase letters following the Indonesian equivalent. Because the term is the first month in the Batak calendar, “*Bulan Sipaha Sada*” is supposed to be retained “as is” to avoid the error in terms of capitalization and, in addition, to preserve its originality too.

The second example regarding a capitalization error can be seen in datum 3. The culturally specific term found is the word “*among*”. In the Batak language, this term is used to address a biological father, like the words “*ayah* or *papa*”. Unexpectedly, the word “*among*” in Batak language and English is an interlingual homograph. They share the exact spelling but are different in meaning and pronunciation. Because of this, Google Translate renders it as is, but the capitalization error occurs when the letter “*a*” (lowercase) is changed to “*A*” (uppercase) in the target language.

Datum 2

Source Language

Tradisi Mardoton dilakukan setiap tahun pada Bulan Sipaha Sada atau bulan pertama pada Penanggalan Kalender Batak.

(Source: Menilik Lebih dalam Tradisi Mardoton, Budaya Tangkap Ikan Warisan Leluhur di Danau Toba)

Target Language

The Mardoton tradition is held annually in **the month of Sipaha Sada**, the first month of the Batak calendar.

Datum 3

Source Language

"Begitulah yang kami tangkap, among!"

(Source: SIBORU TUMBAGA)

Target Language

"That's what we understand, **Among!**"

Lexis level errors

In this level, all errors that affect lexical items are categorized as lexis level errors. It should be clear that, contrary to spelling errors that respect the characters used within a word, lexis errors concern the way each word, as a whole, is translated. Types of errors at the lexis level taken into account are omission, addition, and untranslated. The classification must be based on content words and function words. In this research, the errors found were in terms of addition.

Addition errors

In machine translation, such as Google Translate, an addition error occurs when a word is not present in the source text but is added to the target text. In the following examples, the culturally specific term is the word "**salohat**". **Salohat** is one of the Tobanese musical instruments. It is a blowing musical instrument made of bamboo with no joints (Sipayung & Saragih, 1996). However, in the following example, datum 4, Google Translate translates the term "**salohat**" using addition into "**salohat (a traditional Javanese prayer instrument)**" in the target text. The error found is the additional information added by Google Translate in the target text. Aside from this error, the additional information is incorrect. This error could lead to misinformation, especially for foreigners or those unfamiliar with "**salohat**".

Datum 4

Source Language

Namun selalu beliau menyembunyikan perasaan dengan mengambil salohat.

(Source: SIBORU TUMBAGA)

Target Language

However, he always hid his feelings by taking a **salohat (a traditional Javanese prayer instrument)**.

Semantic level errors

Semantic errors are problems related to word meaning and subsequent incorrect word choice. There are four types of errors in this level: confusion of senses, wrong choice, collocational error, and idioms. In this research, only the confusion of senses and wrong choices were found.

Confusion of senses

In machine translation, such as Google Translate, confusion of senses occurs when a word is translated into a form that represents one of its possible meanings in the target text, but in the given context, the chosen translation is incorrect. In the following example, the culturally specific term is "**boru**". The term "**boru**" in Batak culture means "**daughter**". This is how the Batak parents address their daughter in daily life. Then, the possessive "**-ku**" in the Batak language is spelled identically in Indonesian and is equivalent to "**my**" in English. Thus, the translation result is correct. However, the term "**boru**" is translated by Google Translate into "**dears**" in the target text. This is why this datum is categorized under confusion of senses. Google Translate fails to recognize the term. The possible translation could be "**my dear daughters**".

Datum 5

Source Language

"Kenapa kalian kembali tiba-tiba, boruku?"

(Source: SIBORU TUMBAGA)

Target Language

"Why did you come back suddenly, **my dears?**"

Wrong choice errors

In machine translation, such as Google Translate, a wrong choice error occurs when an unrelated word from the source language is used to translate a given source word into the target language. In the following example, the culturally specific term found is “*among*”, which is equivalent to “*father*” in English. This term is used by Batak children to address their father.

The word “*among*” in data numbers 6, 7, and 8 is translated incorrectly by Google Translate into the target language. Data numbers 6 and 8 show that the word “*among*” is retained “as is” in the target language but is semantically different. The word “*among*” in Batak language and English is an interlingual homograph. They share the exact spelling but are different in meaning and pronunciation. Because of this, Google Translate renders it as is. To overcome this error, the author of the article can add the Indonesian term as additional information in the source language. Moreover, datum 7 shows that Google Translate translates the term “*among*” as “*among others*” in the target language. The chosen equivalents do not relate to the original source. This case is puzzling, especially when the word “*others*” is added in the target language.

Datum 6

Source Language

“*Among,*” *kedua putrinya sebentar menghentikan tiupannya karena mau permisi.*

Target Language

“*Among,*” his two daughters paused for a moment to excuse themselves.

Datum 7

Source Language

“*Begini among. Kami sangat berharap agar ayah segeralah menikah lagi,*” *tandas Siboru tumbaga.*

Target Language

"It's like this, *among others*. We really hope that father will remarry soon," Siboru Tumbaga stated firmly.

Datum 8

Source Language

Begitulah yang kami tangkap, among!
(Source: *SIBORU TUMBAGA*)

Target Language

That's what we understand, *Among!*"

Discourse level errors

Discourse-level errors are discursive options that are not the most expected. At this level of error, there are three different situations at the discourse level: style, variety, and not to be translated. In this research, seven data points regarding culturally specific terms in the Batak language that should not be translated were found.

Under the should not be translated

In machine translation, such as Google Translate, errors in the “should not be translated” category are cases where words in the source language should not have been translated (such as movie titles, company names, specific organizations, proper names, etc.) in the target text.

The first case is shown in datum 9. The phrase “*Bulan Sipaha Sada*” should not be translated in the target text. This is a specific term, a culture, that the Batak people have about their own astrological calendar. In addition, the original text provides additional information or a description of “*Bulan Sipaha Sada,*” by stating “... *atau bulan pertama pada Penanggalan Kalender Batak.*” However, Google Translate fails to recognize that this term should be retained “as is” in the target language.

The second case is shown in datum 10a regarding the term “*parik*” in the source language, which is translated into “*parks*” by Google Translate. The term “*Parik*” in Batak culture specifically refers to the defensive barrier surrounding a traditional village settlement. This term is supposed to be retained as is in the target language. The third case can be seen in datum 10a-c, which consists of three (3) sentences regarding the translation of the word “*huta*”. This term means the vernacular settlement of the Toba Batak tribe. However, Google Translate fails to retain the term “*huta*” and translates it into “*forest*” in the target language. This leads to inaccuracy and even more irrelevance. Even though the text provides what “*huta*” is in Indonesian, Google Translate detects the term “*huta*” as “*hutan*”, which is equivalent to “*forest*” in the target language. For the first and second sentences, this term is translated correctly; however, for the next sentences, the error occurs.

The fourth case is shown in datum 11, where the term “*ganggu*” in the source language is translated as “**bother**” in the target language by Google Translate. As a result, the term is translated correctly and accurately because the word “*ganggu*” is an identical cognate in the Batak language and Indonesian. Then, it is also found that the words “*hamu*” and “*au*”, which appear twice, are translated into “**you**” and “**you or**”. The term “*hamu*” means “**you**,” and the term “*au*” means “**me**” in English. Even though the words “*ganggu*” and “*hamu*” are translated correctly in the target language, they do not represent the contextual meaning of the text. The possible translation of “*unang ganggu hamu au*” could be “**do not bother me**” or “**leave me alone**”. The sentence “*paloas hamu au mangolu*” could be translated as “**let me live**”.

The fifth case is shown in datum 12, where the phrase “*Raja Huta*” in the source text is translated as “**The Huta Kings**” in the target language by Google Translate. In Batak culture, the term “*Raja Huta*” is a title for a leader in a specific village. The article’s author has described what this term means as additional information; however, Google Translate still fails to recognize the cultural term and leads to an error when translating it. However, it should be retained “as is”.

The sixth case is shown in datum 13, where the phrase “*namar ito*” is translated into “**impersonating ito**” in the target text by Google Translate. In the original text, there is no additional information about this term; however, rather than forcing the tool to find the equivalent, Google Translate should not translate it. This causes the error, and it is quite fatal, as the word “*namar*” is translated into “**impersonating**” in the target text.

The seventh case is shown in datum 14, where the term “*tulang*” is translated as “bone” in the target language by Google Translate. In the original text, it is clearly stated that the word “*tulang*” carries additional information indicating that it refers to “*paman*”. However, Google Translate still fails to retain the term, resulting in an error. In addition, the word “*tulang*” is an identical cognate in the Batak language and Indonesian, meaning “**bone**” in English. In this context, the error occurs because the tool is confused about how to differentiate between local language and Indonesian as the national language.

The last case is shown in datum 15, where the phrase “*debata ni parmanukon*” is translated into “**the debate of parmanukon**” in the target language by Google Translate. In Batak culture, “*parmanukon/parmanuhon*” means to foresee someone’s fate (Sitorus et al, 1986). Thus, “*Debata ni parmanukon*” can be defined as a ritual performed by a shaman when he or she is about to foresee someone’s fate or interpret good and bad omens. However, Google Translate recognizes the word “*debata*” is written incorrectly and detects it as “*debat*,” which is equivalent to “**debate**” in the target text. The translation result will confuse the target readers because the meaning is lost and irrelevant to the source text.

Datum 9

Source Language

Tradisi Mardoton dilakukan setiap tahun pada Bulan Sipaha Sada atau bulan pertama pada Penanggalan Kalender Batak.

(Source: Menilik Lebih dalam Tradisi Mardoton, Budaya Tangkap Ikan Warisan Leluhur di Danau Toba)

Target Language

The Mardoton tradition is held annually in **the month of Sipaha Sada**, the first month of the Batak calendar.

Datum 10a

Source Language

Parik melindungi huta dari ancaman musuh ketika ada pertikaian dengan pihak luar. Di setiap sisinya dipagari oleh tembok berbatu dan tersusun rapi yang disebut sebagai parik. Parik melindungi huta dari ancaman musuh ketika ada pertikaian dengan pihak luar. Kondisi parik di Lumbantonga mengenaskan karena sebagian telah dibongkar oleh masyarakat di dalam huta sendiri.

(Source: Keagungan Alam Baktiraja, Negeri Para Raja Batak di Selatan Danau Toba)

Target Language

The parik protected **the forest** from enemy threats during conflicts with outsiders. Each side is surrounded by a neatly arranged stone wall called a parik. The parik protected the **forest** from enemy threats during conflicts with outsiders. The condition of **the parks** in Lumbantonga is dire, as some have been demolished by the local community within their own **forest**.

Datum 10b

Source Language

Masing-masing raja atau pemimpin dari marga tinggal di perkampungan tradisional (huta). Seperti huta lainnya, Lumbantonga yang tidak muncul di Google Maps ini berbentuk seperti benteng yang terdiri dari 12 rumah bolon.

Target Language

Each king or clan leader lived in a traditional village (huta). Like other **forests**, Lumbantonga, which doesn't appear on Google Maps, is fortified and consists of 12 bolon houses.

Datum 10c

Source Language

Kami diajak berkeliling huta bersama BPODT dari huta hingga situs sarkofagus leluhur marga Manalu.

Target Language

We were taken on a **forest** tour with the BPODT (Indonesian Food and Agriculture Organization) from the **forest** to the site of the Manalu clan's ancestral sarcophagus.

(Source (data 10b-c): *Keagungan Alam Baktiraja, Negeri Para Raja Batak di Selatan Danau Toba*)

Datum 11

Source Language

Bahkan, ada pekerja yang tengah kesurupan berkata, "Unang ganggu hamu au, paloas hamu au mangolu, nga dibereng hamu ulaon nabinaen muna sude marisuang, boru Simanjuntak do au boruni Damang Pangumban Bosi."

Target Language

In fact, there is a worker who is in a trance saying, "Unang **bother you**, paloas **you or** mangolu, nga diberenge hamu ulaon nabinaen muna sude marisuang, boru Simanjuntak do au boruni Damang Pangumban Bosi."

(Source: *Legenda Hau Sisada-sada, Pohon Berumur Ratusan Tahun di Tano Batak*)

Datum 12

Source Language

Aturan mainnya sudah ditentukan oleh para Raja Huta, yaitu perempuan menari untuk menarik perhatian laki-laki sebagai jodohnya.

Target Language

The rules of the game have been determined by **the Huta Kings**, that is, women dance to attract the attention of men as their partners.

(Source: *Legenda Hau Sisada-sada, Pohon Berumur Ratusan Tahun di Tano Batak*)

Datum 13

Source Language

Namun, tanpa disadari, mereka ini namar ito.

Target Language

However, without realizing it, they are **impersonating ito**.

(Source: *Legenda Hau Sisada-sada, Pohon Berumur Ratusan Tahun di Tano Batak*)

Datum 14

Source Language

Tapi, Pangumban Bosi Simanjuntak justru tidak setuju kalau mereka menikah karena pemuda yang melamar anaknya, adalah tulang (paman) dari anak-anaknya.

Target Language

But, Pangumban Bosi Simanjuntak actually did not agree if they got married because the young man who proposed to his son, was **the bone (uncle)** of his children.

(Source: *Legenda Hau Sisada-sada, Pohon Berumur Ratusan Tahun di Tano Batak*)

Datum 15

Source Language

Datu Partungkot Bosi tidak begitu sulit menduga hal-hal baik dan buruk melalui debata parmanukon.

Target Language

Datu Partungkot Bosi had no difficulty predicting good and bad things through **the debate of parmanukon**.

(Source: *SIBORU TUMBAGA*)

CONCLUSION

As this research aims to identify the errors that Google Translate make in rendering culturally specific terms in the Batak language into English, it can be concluded that Google Translate fails to recognize

such terms. Thus, the results of the translation are identified as errors in the target language. Based on the findings, there are some possible reasons these errors occurred: (1) Google Translate is a system. The translation results were not based on meaning. (2) Many words are spelled identically in different languages but are different in meaning and pronunciation. This, of course, leads to an error. (3) The author of the article is suggested to add additional information regarding cultural terms. On some occasions, this strategy can lead Google Translate to render cultural terms “as is,” but the additional information must be translated accurately.

In this research, Batak cultural terms were translated “as is” and considered successful translations because they do not exist in other languages. Otherwise, Google Translate will try hard to find equivalents in the target language, even if it results in an error. This phenomenon makes human translators more reliable than machine translation. For instance, idiomatic expressions or terms that must be translated using contextual meaning. Thus, machine translation is far more beneficial as an assistant to humans.

Moreover, based on the classification of errors, there were no data found for (1) orthography in terms of punctuation and spelling errors, (2) lexis level in terms of omission and an untranslated error, (3) grammar level in terms of misselection errors and misordering errors, (4) semantic level in terms of collocational error and idioms, and (5) discourse level in terms of style and variety.

REFERENCES

- Costa, Á., Ling, W., Luís, T., Correia, R., & Coheur, L. (2015). A linguistically motivated taxonomy for machine translation error analysis. *Machine Translation*, 29(2), 127–161. <https://doi.org/10.1007/s10590-015-9169-0>
- Hatim, B., & Munday, J. (2004). *Translation: An advanced resource book*. Routledge.
- Kanoko, N. P., & Sutrisno, A. (2024). Translation evaluation of social media auto-translate feature toward news headline. *Sasdaya: Gadjah Mada Journal of Humanities*, 8(2), 235–255.
- Koehn, P. (2010). *Statistical machine translation*. Cambridge University Press.
- Li, Y. (2026). A comparative study of Nida’s and Koller’s translation theories. *Advances in Applied Sociology*, 16(2), 65–73. <https://doi.org/10.4236/aasoci.2026.162005>
- Lim, W. M. (2025). What is qualitative research? An overview and guidelines. *Australasian Marketing Journal*, 33(2), 199–229. <https://doi.org/10.1177/14413582241264619>
- Lubis, A. M., Jusuf, S., Butar-butur, T. M., & Malau, M. (1986). *Kalender peramalan Batak*. Departemen Pendidikan dan Budaya Sumatera Utara.
- Majji, E. R., Ampalam, S. B., & Raju, C. (2025). Evaluating Google Translate as an AI-powered translation tool: Strengths, limitations, and implications for multilingual communication. *Journal of Information Systems Engineering and Management*, 10(54s), 135–141.
- Naveen, P., & Trojovsky, P. (2024). Overview and challenges of machine translation for contextually appropriate translations. *iScience*, 27(10), Article 110878. <https://doi.org/10.1016/j.isci.2024.110878>
- Newmark, P. (1988). *A textbook of translation*. Prentice Hall International.
- Sadikhova, S., & Babayev, J. (2025). Challenges encountered in translation of culture-bound and subject-specific terminology while using Google Translate. *EuroGlobal Journal of Linguistics and Language Education*, 2(3), 119–126. <https://doi.org/10.69760/egille.2500203>
- Sitorus, M., Marbun, J., Tampubolon, W., Sinaga, M., & Sibuea, S. B. (1986). *Sistem kata benda dan kata sifat bahasa Batak Toba*. Pusat Pembinaan dan Pengembangan Bahasa, Departemen Pendidikan dan Kebudayaan.
- Stymne, S., & Ahrenberg, L. (2012). On the practice of error analysis for machine translation evaluation. In *Proceedings of the Eighth International Conference on Language Resources and Evaluation (LREC 2012)* (pp. 1785–1790).
- Tylor, E. B. (1871). *Primitive culture*. Bradbury, Evans, and Co.