



Machine Translation Use in Presentation Scripts: Learners' Reflections and Implications for English Education

Hyun-Jin Kim (Ajou University)



This is an open-access article distributed under the terms of the Creative Commons License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Received: March 31, 2024

Revised: April 17, 2024

Accepted: April 20, 2024

Kim, Hyun-Jin (1st author)
Teaching Professor,
Dasan University College
Ajou University
206 Worldcup-ro, Yeongtong-gu
Suwon, Korea
Tel: 031)219-3044
Email: hjinkim@ajou.ac.kr

ABSTRACT

Kim, Hyun-Jin. 2024. Machine translation use in presentation scripts: Learners' reflections and implications for English education. *Korean Journal of English Language and Linguistics* 24, 425-440.

The significant advancements in machine translation (MT) technologies highlight their inevitable integration into language learning contexts. This study examines Korean university students' utilization and perceptions of MT tools, particularly in writing English presentation scripts, exploring their strategies and experiences with MT in language learning. The participants comprised 29 first-year students enrolled in a general English course at a university. Data collection involved students' reflection papers on the presentation, focusing on guiding questions to explore various aspects of their experiences, viewpoints, and attitudes regarding MT use in script writing for oral presentations. Findings reveal that students use MT to address challenges in clarity, word order, and complex sentences in English writing, indicating a willingness to engage with MT. The unanimous agreement among students highlights the perceived benefits of using MT, notably its significant impact on enhancing the overall effectiveness and efficiency of English writing tasks. This positive aspect, however, calls for strategic guidance from language educators to mitigate potential drawbacks. The study proposes strategies for incorporating MT in classroom English language instruction, emphasizing the importance of instructor guidance and student reflection in navigating the complexities and potentials of MT in this underexplored genre in foreign language education.

KEYWORDS

machine translation, English teaching and learning, L2 writing, presentation script, student reflection

1. Introduction

As machine translation (MT) has witnessed rapid development, it has become an integral part of daily life, contributing to effective communication and accessibility of information. In daily communication, for example, MT tools are now used for instant translation of text messages, emails, and social media posts across different languages, facilitating communication between individuals who speak different languages. While traveling, MT apps and devices are employed to provide real-time translation of menus and spoken language in foreign countries, helping travelers navigate and communicate effectively in unfamiliar environments. Due to its accessibility and convenience, an increasing number of second (L2) language learners now acknowledge the utility of MT as a supplementary resource in language acquisition (Garcia and Pena 2011, Lee 2019, O'Neill 2016).

Machine translation is the computerized systems of translating content from one language to another with or without any human involvement (Hutchins 1995). The original text (i.e., source) is split into words and phrases, and the MT technology will replace these with words and phrases in another language (i.e., target). Although the current MT technology is not guaranteed to be 100% accurate, the introduction of neural machine translation in 2016 has significantly improved the accuracy and fluency of MT, as it utilizes artificial neural networks to process the entire translation process (Koehn 2020). The goal of MT is to produce accurate and coherent translations that convey the meaning of the source text in the target language. In the field of language education, there is growing research focused on evaluating the educational effectiveness of using MT (Garcia and Pena 2011, Lee 2020, O'Neill 2016, Tsai 2019), demonstrating how these modern tools have revolutionized the process of learning foreign languages.

In the context of English as a foreign language (EFL) education, prioritizing first-year university students assumes critical importance given the transitional phase they undergo, particularly considering their novice status in academia. Most universities in Korea designate general English courses as required or elective courses in a way that first-year students must take a certain number of credits to fulfill graduation requirements. General English courses focus on developing overall proficiency in reading, listening, writing, and speaking skills to equip students with the language proficiency necessary for successful communication in their future professional endeavors, thereby preparing them for success in their careers. Academic English courses, on the other hand, specifically prepare students for academic success in English-medium environments by targeting advanced language skills tailored to the academic context. Thus, the relationship between general English and academic English is intertwined and complementary, offering students a comprehensive English language education that encompasses both everyday language use and the specialized skills required for academic success.

Class presentations are commonly used to enhance students' speaking skills in both general and academic English courses, making presentation skills as a shared focus across these domains. Hence, investigating the genre of presentation scripts is valuable, as preparing for presentations typically involves crafting a script in advance, contributing to the development of writing skills. Research indicates that prior writing can significantly enhance the accuracy and fluency of learners' spoken language. By first composing written content, learners can preview and refine their language output, leading to reduced anxiety and improved presentation quality when speaking English (Lee and Yoon 2010). Given that this genre needs more attention, this study aims to investigate how first-year university students utilize MT tools in creating presentation scripts and to explore their perceptions and strategies regarding the use of MT tools, providing early guidance on its utilization. This guidance aims to help students develop essential language skills and critical thinking, leveraging machine translation as a valuable learning tool.

2. Literature Review

2.1 Perspectives on Machine Translation by Language Learners and Educators

A considerable body of literature has delved into the investigation of MT usage, exploring learners' perceptions regarding its application in translation and L2 learning (Clifford et al. 2013, Jolley and Maimone 2015, Lee 2019, Niño 2009, O'Neill 2016, Tsai 2019). The literature presents a diverse spectrum of viewpoints encompassing both negative and positive perspectives regarding the utilization of MT. In Niño's (2009) study, a significant majority of participants who engaged in post-editing activities using MT reported that it aided their language learning, with many also mentioning increased confidence as a result. Clifford et al. (2013) found that a large proportion of learners viewed MT as occasionally or consistently useful for language learning while Jolley and Maimone (2015) found that slightly more than half of learners agreed or strongly agreed that MT positively impacted language learning.

Recent studies further support favorable viewpoints towards MT involving diverse learner populations with Chinese and Korean as their respective first languages in the context of English as a second or foreign language (ESL or EFL) instruction (Ahn and Chung 2020, Im 2017, Lee 2020, Tsai 2019). Im (2017) investigated the perspectives of Korean university students regarding the use of automatic translation in a general English class. The study revealed students' favorable attitudes, as they aimed to enhance their vocabulary and expressions by utilizing automatic translation to enrich their writing assignments. Additionally, students showed a clear preference for automatic translation feedback over teacher feedback. Tsai (2019) conducted a study on 124 Chinese ESL learners, comparing their English writing tasks with and without the help of a machine translator. College students initially completed a writing task without the aid of a machine translator, then translated the same text using Google Translate. The results of the study indicated that participants generally rated the benefits of using MT for lexical items, its improvement on final English texts, and overall satisfaction with MT outputs positively. Comparable findings were reported by Lee (2020), where a majority of Korean participants perceived that using MT as a revision tool contributed to enhancing their writing skills at a college level. In a study conducted by Ahn and Chung (2020), Korean college learners were surveyed regarding their utilization of MT for English writing tasks. It was found that learners with lower proficiency levels tended to rely on MT more often, and they reported greater satisfaction with its use. The motivations for using MT varied among participants, with lower-level learners primarily seeking assistance with grammar, while those with higher proficiency levels sought support in enhancing their vocabulary.

However, learner perspectives on MT are not entirely positive. There were inquiries recording negative perspectives regarding MT in the earlier literature. Clifford et al. (2013) found that participants generally considered MT output to be somewhat accurate at best. Similarly, Jolley and Maimone's survey (2015) indicated a similar perception of unreliability, particularly for longer segments, although many learners considered Google Translate output as somewhat accurate. In a related context, White and Heidrich (2013) observed that while students generally trusted the accuracy of online MT tools, they encountered challenges in expressing their own voice and recognizing improvements in their writing style. More recently, Niño (2020) investigated students' perceptions of written translations and oral output from online MT tools, including Google Translate. Although many learners found MT written translation useful for various tasks and believed it contributed to the improvement of their writing, acceptance levels varied regarding audio output, with some encountering comprehensibility issues and expressing dissatisfaction with the results.

From an educational standpoint, language educators traditionally harbored reservations about the adoption of MT tools due to their inaccuracies. Consequently, it is posited that learners, particularly those with limited proficiency, should exercise caution in excessively relying on online machine translation tools, as they may struggle to discern

and repair errors inherent in machine-generated translations. In addition to linguistic inaccuracies, contextual discrepancies in translations have been pointed out as limitations of MT in scholarly discourse (Crossley 2018, Lee and Briggs 2020). Furthermore, there are concerns that excessive reliance on machine translation might lead students to disengage from the cognitively demanding aspects of writing in a foreign language (Crossley 2018, Murtisari et al. 2019).

However, not all researchers endorse the idea of discouraging the use of MT; instead, they encourage the practical implementation of MT in language learning. White and Heidrich (2013) conducted a comprehensive study, utilizing surveys, writing assignments, and interviews to examine learners' perceptions and strategies regarding MT usage. Despite policies discouraging MT and recognizing its limitations, learners actively relied on it. White and Heidrich's study highlighted the importance of guiding learners on effective MT use, emphasizing an informed and responsible approach. Given the recent advancement of technology in machine translation, Jiménez-Crespo (2017) proposes that instructors embrace the presence of digital natives and contemplate the didactic role of MT in the 21st-century classroom.

To summarize, the literature reflects a wide range of perspectives, incorporating both positive and negative viewpoints on the use of MT by both learners and researchers. However, in light of recent technological advancements in machine translation, an increasing number of scholars advocate for a focus on its positive impacts on language learning, emphasizing practical implementation rather than strict restrictions of MT.

2.2 L2 Writing with Machine Translation Tools

Acquiring proficiency in L2 writing presents a cognitive challenge, involving intricate tasks such as drafting, planning, and revising. Unlike other receptive skills such as listening or reading, writing imposes a higher learning burden on L2 learners. In the EFL context, achieving the desired level of English writing competence within a single semester proves to be a formidable task for the majority of university students (Kim 2022). As a result, students are prone to actively depend on MT for their writing tasks, even when their instructors impose restrictions on its usage.

While some research findings indicate that online machine translation tools can impede English language learning due to inaccurate translations or feedback (Crossley 2018, Lee and Briggs 2020, Sheppard 2011, Somers et al. 2006), the continuous evolution of online machine translation has led to an increasing number of studies examining its impact on learners' L2 development, particularly within the domain of writing (Garcia and Pena 2011, Jeong 2021, Lee 2019, 2020, O'Neill, 2016, 2019, Tsai, 2019). Garcia and Pena (2011) explored whether the use of online MT could help college students improve their L2 writing skills and found that with the help of MT, beginner-level learners were able to communicate more and better, writing more words and producing more complex texts. Similarly, O'Neill (2019) found that college students who received prior online MT training outperformed the non-MT group in an L2 writing task, and that learners who used MT received more help with comprehension, content, grammar, and spelling. As a result, O'Neill emphasized that online MT can be a valid learning tool for exploring language when properly trained to use it. Tsai's (2019) study on Chinese English learners' English writing tasks, reported that the machine-translated versions had a higher word count, fewer grammatical errors, and utilized more complex vocabulary compared to the texts written without the assistance of a machine translator.

Examining the role of MT in improving the quality of L2 writing and writing strategies among Korean university students in particular, Lee (2019) reported that using Google Translate helped learners to reduce grammatical errors and had a positive impact on the writing strategies they applied. Lee also argues that it can be useful if English teachers recognize the pitfalls of MT and provide appropriate training to learners. Another study conducted by Jeong (2021) involved a comparison of writing approaches using machine translation tools. Jeong asked Korean college students

to write an English presentation script using Google Translate and Naver Papago¹. Students initially drafted the script in Korean, then produced English versions: one without machine translation and another utilizing MT tools. Notably, the students showed significant improvements in sentence length in their post-test writing assignments using MT. Additionally, students expressed increased psychological comfort and confidence in English writing tasks with MT, yet they expressed a preference for a blend of instructor and machine translation feedback.

Klimova et al. (2023) investigated the application of AI technologies, including MT, in university-level EFL contexts. They reported significant advancements in language acquisition, particularly noting MT as a supportive tool for enhancing students' confidence in writing. These advancements included the development of lexical and grammatical structures, alongside improvements in fluency. Furthermore, beyond linguistic gains, the utilization of these technologies positively influenced students' writing confidence, increased engagement in the learning process, and had a beneficial effect on motivation. In the context of English for academic purposes (EAP), recent advancements in MT accuracy, particularly in writing applications, have significantly enhanced its utility in supporting academic writing (Chon et al. 2021, Gritsay and Vodyanitskaya 2021). Similarly, Vold (2018) asserts that proactive EAP learners leverage MT as a learning aid to enhance their linguistic proficiency in the target language. Despite mixed perceptions of MT, therefore, it is now widely embraced as a reference tool by learners, with diverse approaches to its usage evident in both general English and academic English.

Until now, the predominant focus of research has centered on automatic translators, exploring various aspects of their usage, perceptions, and attitudes among learners and educators. Despite these extensive explorations, there is a notable gap in the literature regarding the specific application of MT in L2 presentation script writing, and the corresponding perceptions and attitudes of learners in this specific context. This research gap highlights the need for a more nuanced understanding of the role and impact of MT in L2 presentation script writing, providing a groundwork for further investigations in this unexplored genre.

Addressing this gap, the present study specifically investigates students' use of MT tools to enhance written communication for oral presentations. To explore this realm, it is crucial to understand the expectations and perspectives that the target learners hold regarding the use of MT and their practical utilization of translators. The study is designed to answer the following two research questions concerning students' use of MT in crafting presentation scripts within a general English class at a Korean university:

- 1) How do first-year university students employ MT tools in the process of crafting presentation scripts?
- 2) What are their perceptions of the capability of MT tools and their strategies toward using these tools?

3. Methods

3.1 Participants

The participants in this study consisted of 29 first-year students enrolled in a general English course at a university in Korea. The course primarily focuses on reading skills, supplemented by writing assignments that assess comprehension of reading texts. Making an English presentation and writing its script are also mandatory components of the course. Participants' ages range from 18 to 21 years old, with an average age of 19. All participants were native

¹ Naver Papago is a machine translation program developed by Naver Corporation, a South Korean technology company. It provides translation services between various languages, allowing users to translate text, speech, and images in real-time.

Korean speakers, and their major field of study was engineering. They are classified as Grade 3 or 4 in English based on the Korean College Scholastic Ability Test (CSAT), which is the criterion for their placement in an intermediate-level class, following the two-tiered structure of English courses specified in the institutional curriculum. When questioned about their English proficiency, the majority of participants rated themselves as intermediate (51.8%) and low-intermediate (31.0%). In terms of their level of interest in English, the most common response was “moderately interested” (44.8%), with “very interested” and “slightly interested,” both noted at a rate of 17.2%.

Table 1. Demographic Information of Participants

Category	Response Option	Count (%)
Gender	Male	19 (65.5)
	Female	10 (34.5)
English proficiency (self-reported)	Low-intermediate	9 (31.0)
	Intermediate	15 (51.8)
	Advanced	5 (17.2)
Interest in English	Not Interested at all	3 (10.3)
	Slightly interested	5 (17.2)
	Moderately interested	13 (44.8)
	Very interested	5 (17.2)
	Extremely interested	3 (10.3)

3.2 Data Collection and Analysis

The data collection instrument consisted of students' reflection papers on the course presentation, which mainly included their responses to six guiding questions. These questions explored various aspects of students' experiences, viewpoints, and attitudes regarding the use of MT in the context of their general English class tasks, with a specific focus on script writing for an oral presentation. Specifically, question items 1 and 2 delved into the MT programs and tools predominantly used for crafting a presentation script and the specific parts in a script where MT tools were applied, respectively. Questions under items 3 and 4 sought insights into the benefits and drawbacks of MT usage. Item 5 aimed to gauge students' ability to identify and address errors, while item 6 inquired about their strategies for using MT tools to enhance English language skills. Students were asked to write honestly about their experiences using machine translation with details, and there were no strict requirements regarding the structure or organization of the reflection paper. Thematic coding was employed to analyze responses to these open-ended questions (Lee, 2019). Recurring themes or topics were identified to establish the initial codes. These codes were then grouped into broader themes.

4. Results

4.1 MT Programs and Tools Usage

This section reports the responses to question items 1-2 on machine translation usage patterns. The results presented in Table 2 reveal that Naver Papago is the most extensively used translation tool among students (79.3%), whereas Google Translate is notably less frequently employed (10.3%). Other respondents mentioned using DeepL or ChatGPT although ChatGPT is an AI tool rather than a machine translation tool. The prevalence of Naver Papago

can be attributed to its status as an online language translation service developed by a well-known South Korean technology company. This regional affiliation likely contributes to students' comfort and accessibility with this service.

Table 2. MT/AI Tools Used

MT/AI tool	Count (%)
Naver Papago	23 (79.3)
Google Translate	3 (10.3)
DeepL	2 (6.9)
ChatGPT	1 (3.4)
Total	29 (100.0)

Students then reported particular areas where they utilized MT tools. In analyzing their MT usage patterns in script writing for presentations, several thematic codes have emerged from their responses. These include employing MT tools to enhance vocabulary and expressions, craft lengthy and intricate sentences, verify grammar and sentence structures, and translate an entire script from Korean to English. Representative examples of student responses for each theme will be presented in the subsequent subsection, ordered by response prevalence.

4.1.1 MT use for aiding vocabulary and expressions

Students reported they used MT for searching unfamiliar words or expressions while writing a script. In other words, when vocabulary assistance is needed, students tend to use MT tools in place of dictionary. Table 3 presents selected responses from diverse students. Each excerpt is accompanied by the corresponding student code number in parentheses.

Table 3. MT Use for Aiding Vocabulary and Expressions

Category	Excerpts of Student Responses
Vocabulary Support	I used machine translation when struggling to recall English words. (S03)
	I used a translator a lot to create this sentence: <i>"At this time, a polyp was discovered in the gallbladder, and the doctor said that if left untreated for a few more months, it could develop into cancer."</i> Because this sentence contains words that are not commonly encountered, I couldn't think of how else to say it. (S12)
Expression Support	I used Papago for word support. For example, I didn't know how to say "목차," (<i>Mok-cha</i>) and "독학했다" (<i>Dok-hak-haet-da</i>) in English, so I typed them into Papago and got "the table of contents" and "I taught myself at home." (S07)
	One of the sentences in my presentation, <i>"However, he observed that everything would eventually be okay as time went by"</i> was originally written by me as <i>"He told me that later, they finally be okay."</i> I asked ChatGPT to change it to sound more natural. It is not easy to change the phrase "시간이 지나면" into English naturally unless I have a high level of English proficiency. (S13)

4.1.2 MT use for composing lengthy and difficult sentences

Students reported that they used translators when making long and complex sentences, especially those with relative clauses. Additionally, one student noted that MT tools assist in handling abstract concepts when crafting English sentences. Table 4 shows representative responses.

Table 4. MT Use for Composing Sentences

Category	Excerpts of Student Responses
Crafting Complex Sentences	In my presentation script, I have a sentence “ <i>AI semiconductors are specialized semiconductors in terms of efficiency that perform large-scale operations necessary to implement AI services at ultra-high speed and ultra-power, and are the core brains of AI,</i> ” for which I used Papago. Because of the length of the sentence, the word order of the sentence was not clear to me, and there were so many modifiers for AI semiconductor that I was confused about how to properly and grammatically use relative pronouns. (S02) I tried to use a translator to solve the problem of long relative clauses that are difficult to write by myself. “ <i>Focusing on the contents that reflect Korea’s unique culture, which is difficult to explain in English, and the speed of the answers of the conversation is slow</i> ” is an example. (S09)
Handling Abstract Phrases	I use translation tools mainly because it is difficult to write phrases with abstract meaning in Korean with the same meaning in English. I used Papago to make this sentence, “그렇다고 해서 내 슬픔이 가시는 건 아니다” into English. The output was “ <i>But that doesn’t make my grief go away.</i> ” (S25)

4.1.3 MT use in verifying grammar and sentence structures

Additionally, students employed AI tools to review and verify the grammar in their English sentences, especially when they sensed that the expressions used in their writing sounded awkward or unusual (see Table 5).

Table 5. MT Use for Verification

Category	Excerpts of Student Responses
Sentence Structure Verification	I cross-checked with MT to see if the sentences I made align with the intended meaning. I originally made a sentence like “ <i>The singer of the song is the band that called Lukas Graham.</i> ” Then I ran through Papago to revise. “ <i>The singer of this song is a band called Lukas Graham</i> ” was the result. (S06) I wrote simple expressions and the introduction part by myself. I used machine translation for difficult content to check, then revised the expression more appropriately. (S19)
Grammar Verification	In preparing for this presentation, I was able to write the main content in English, but the overall sentence structure did not allow for natural connections between words, so I used Papago for this purpose. An example of this is “ <i>Have you ever loved someone passionately?</i> ” I could think of words that conveyed the same idea, such as <i>love</i> and <i>passionately</i> , but I didn’t know how to phrase it to ask them about their experience, so I used Papago, and it gave me the present perfect form of the sentence. (S11)

4.1.4 MT use for the whole script translation from Korean into English

A distinctive pattern observed was some students initially composing the whole script in Korean and subsequently generating English versions using MT tools. That is, students applied MT in converting the whole script from Korean to English. Table 6 presents selected responses.

Table 6. MT Use for the Whole Script Translation

Category	Excerpts of Student Responses
Translation of Script from Korean into English	I wrote the script in Korean first and then used Naver Papago to translate. Because my translation may be grammatically incorrect, I used it for accurate translations. (S08) Before translating, I wrote the whole script in Korean first. For example, I entered the introduction, “이 곡은 칼라일이 휠러에게 사랑을 고백하는 반면, 휠러는 우리는 이루어질 수 없는 운명이라고 노래한다” from the Korean script into Papago and it translated this sentence into “ <i>Carlyle sings love to Wheeler, but Wheeler sings that we’re not destined.</i> ” (S11) After writing all sentences in Korean, I used Papago. If the output had a smooth context flow, I used it for my script. (S26)

To summarize, students' mixed use of MT for vocabulary and grammar as well as complex sentences in composition and revision was noticeable. Another notable trend observed was that students first composed the entire script in Korean and then produced English versions using MT tools.

4.2 Benefits Perceived from MT Usage

This section explores students' perspectives on the advantages of utilizing MT, focusing on their responses to question item 3. Two thematic codes have emerged regarding their perception of the benefits of using MT. The dominant theme is the effectiveness and efficiency of completing writing tasks in English, followed by the enhancement of emotional comfort in English writing. Representative examples of student responses for each theme will be presented in the subsequent subsection.

4.2.1 The effectiveness and efficiency of writing tasks in English

Most of the students reported that they use MT tools to address issues, such as unclear words, expressions, or grammatical concerns promptly and efficiently during the writing process. Table 7 showcases student responses for each category within this theme.

Table 7. Benefits of MT in Efficient English Writing

Category	Excerpts of Student Responses
Efficiency in Word Selection	It's nice to be able to quickly find a word that I don't know without having to look it up in the dictionary. (S07)
	The advantage of a translation program is that it uses more appropriate words than the ones I used in script writing. When I was trying to convey some idea, I wanted to be more specific, but since I didn't know many words, I used the same words over and over. (S14)
Efficiency in Sentence Formation	It is very helpful when I don't know how to write a certain sentence. I don't know the grammar exactly, and the word order in English is different from Korean, so I often can't write in English using words that I don't know by just looking it up in an English dictionary. The reason I can write quickly in such a situation is because I can use a translation program. (S17)
	It would have taken me a very long time to find the right words for the context, put them together, and make sure they were grammatically correct, but Papago helped me with the sentence and saved me a lot of time when I was struggling to make a sentence. (S20)
Enhancing Writing Clarity and Efficiency	It's great to be able to get a rough idea of incorrect phrasing, awkward expressions, and even the right word for the context. I think I'll be able to improve my writing quickly. (S10)

4.2.2 Enhancing emotional or affective aspect of English writing

The efficient resolution of challenges during English writing assignments naturally makes students feel more comfortable, even when facing the burden of writing in English. Table 8 presents selected responses.

Table 8. Benefits of MT in Affective Aspect

Category	Excerpts of Student Responses
Emotional Comfort in English Writing	It's true that translation programs help us. If I had to write my presentation script without using a translation program, this assignment would have been even more challenging. (S01)
	I think it breaks down the language barrier a bit emotionally. (S19)
	Having a translator to translate sentences that I have trouble expressing was a huge help in scripting my English presentations, because without it I could easily get stuck or frustrated because I can't express what I want to say. (S24)

To summarize, the unanimous agreement among students highlights the perceived benefits of using MT, particularly its significant impact on enhancing the overall effectiveness and efficiency of English writing tasks. Also, emotional comfort experienced while using MT to tackle challenging language tasks, such as writing, is highlighted as one of its benefits.

4.3 Drawbacks Identified in MT Usage

This section presents the responses to question items 4 and 5, focusing on students' views on the drawbacks of utilizing MT and how to address errors in MT. Students responded to these two questions in a connected manner, addressing both aspects in a single response. Two thematic codes have emerged with the primary theme focusing on errors in translation, followed by overreliance on MT. Representative examples of student responses for each theme will be presented in the subsequent subsection.

4.3.1 Errors in translation

Most students' main concern about MT drawbacks was occasional errors that occurred in translation, especially those related to homonyms in the Korean language. Another concern was that mistranslations commonly happen in long sentences, as machine translation may not accurately capture the intended meaning in Korean sentences. Table 9 shows representative responses.

Table 9. Errors of MT in Translation

Category	Excerpts of Student Responses
Homonym Translation Errors	When I was using the translator for this presentation, there was one sentence that stood out in my mind, "daily painting expression." When I entered the phrase "일상 회화 표현" into the translator, I wondered where painting came from, and realized that the translator had taken a word that meant "talking to each other face-to-face" as a painting that meant "drawing." For this assignment, I used the translator only for difficult sentences, and when writing, I used the translator only for certain parts of the sentence, so it was easy to find the strange parts, and I think this is a good way to catch the mistakes of the translator. (S15)
	MT often made mistranslations, especially when it came to homonyms. For example, when translating the word 기사(Gisa), I wanted 'article' but Papago translated it as 'knight' or 'driver.' It was frustrating that MT does a one-on-one translation without considering the context. (S18)
	I encountered more errors than anticipated when using translation programs. The most common error seems to be with homonyms, which are translated into really stupid words that don't mean what I want them to mean. In this case, I think I need to figure out exactly what I want to say, look carefully at that part, and express in English by myself. (S22)
Awkward Translations in Long Sentences	The inconvenience is that even slightly longer sentences can lead to a lot of awkward translations. I would have to rewrite or rephrase the sentence in a different way. It's also difficult because my sentences were often interpreted as something other than what I wanted them to mean. (S28)

4.3.2 Issues related to overreliance on MT

Another theme that emerged was their concerns related to overreliance on MT. One student mentioned the loss of personal sentence ownership and identity as the drawback of relying on a translator. Other students pointed out the risk of hindering the development of English skills and knowledge by indiscriminate use (see Table 10).

Table 10. Overreliance on MT

Category	Excerpts of Student Responses
Loss of Personal Identity in Sentences	The downside of relying too much on a translator is that there are no sentences that are mine. The worst part is that I lose the identity of my sentences. To prevent it, I think it is helpful to try to anticipate the answer of Papago before using the program and compare it with the answer of Papago. To avoid this, I find it helpful to anticipate Papago's answer before using the program and compare it with Papago's response. (S01)
Impeding English Skill Development	I realized that I shouldn't use translators as much in the future to develop my English, because while they are useful to a certain extent, I felt that if I rely everything on them, I wouldn't be able to develop on my own, and I wouldn't be able to even guarantee my current level of English. (S22)
	I don't mind using a translation program to help me understand something, but I think it's very dangerous to indiscriminately run it first whenever I need to express something in English. I think it's the easiest and most powerful way to hinder my ability to increase English skills and knowledge through study. (S24)

To summarize, many students expressed concerns about the drawbacks of MT, particularly related to occasional errors, especially those with homonyms in Korean and mistranslations in long sentences. To address these errors, students would use the translator only for difficult sentences or specific parts, allowing them to identify and correct mistakes easily. Another theme was the risk of overreliance on MT, with students mentioning the loss of personal sentence ownership and hindrance in English skill development.

4.4 Strategic Use of MT Programs for Enhancing English Skills

Building on the inquiry into MT drawbacks, students, in response to the subsequent question about their strategy in MT use for language learning, expressed an intention to proactively create sentences on their own before turning to MT for verification. Table 11 presents representative responses.

Table 11. Strategic Use of MT Programs

Category	Excerpts of Student Responses
Intention to Proactively Create Sentences	Translator is not a perfect program yet, so I want to be someone who has at least a good grasp of the basics of making English sentences and can spot and correct errors in expression through many conversations with foreigners. (S10)
	I should use these programs appropriately to develop my English skills. First, I should create my own sentences and compare them with the program's translation or correct them based on the information it gives me. I think it's important not to rely on MT, but to write myself and get a lot of experience with MT. (S28)
Translation Program as a Learning Aid	I can improve my English skills by getting help on how to make sentences to sound natural when translating from Korean to English, rather than copying and translating all the parts. (S11)
	It's great to develop my English skill by using translation programs. However, I think it's more important to invest my efforts in learning English directly and not completely rely on the translation results. I think I need to use a translation program as a helper and continue to learn and practice to improve my English skills. (S16)
	Relying solely on such programs can impede the improvement of my English proficiency, so they should not be overused. Instead, I should utilize them only for difficult translation tasks. After using the program, I'll compare the script translated by the program with the one I translated myself. By evaluating which translation is better, I integrate both versions to create a new script. This approach seems to be a more suitable way to make effective use of such translation programs. (S25)

Most students highlighted a practice of writing their own sentences, then comparing and correcting them using MT and provided information. Their insistence on not depending solely on the MT tools and the emphasis on gaining experience through independent writing reflect a deliberate strategy in language learning. These responses carry valuable pedagogical implications that should be discussed further in the next section.

5. Discussion

The notable progress in machine translation technologies underscores their inevitable integration into language learning contexts. It is foreseeable that machine translators will become indispensable for students in their future academic and communicative endeavors. In the present context, this study explored the utilization and perceptions of machine translation in presentation script writing among English learners, aiming to offer recommendations for enhancing students' active engagement in English courses, drawing insights from their experiences and perspectives on MT.

The first research question posed was: "How do first-year university students employ MT tools in the process of crafting presentation scripts?" In terms of usage, the findings underscore a varied application of MT, encompassing vocabulary, grammar, and the construction of intricate sentences during composition and revision. The MT use in script writing observed in this study are generally in line with previous literature on students' MT use in L2 writing (Ahn and Chung 2020, White and Heidrich 2013), albeit not specifically focused on script writing. Additionally, a notable trend observed was the initial drafting of scripts in Korean, followed by the generation of English versions through MT tools.

The second research question was: "What are their perceptions of the capability of MT tools and their strategies toward using these tools?" Student responses emphasized the benefits of using MT, particularly its impact on enhancing the effectiveness and efficiency of English writing tasks. These findings align with previous literature (Im 2017, Lee 2020, Tsai 2019). Emotional comfort in handling challenging writing tasks was also highlighted. Concerns about MT drawbacks mainly revolved around occasional errors, particularly with homonyms in Korean, and mistranslations in long sentences. Although only a few responses touched on this theme, an important concern emerged regarding the risk of overreliance on MT. Students expressed worries about the potential loss of personal sentence ownership and the hindrance in developing English skills. This highlights their awareness of the potential risks associated with relying too heavily on MT for language learning. These responses hold significant pedagogical implications.

In the findings, their usage patterns reveal the difficulties they face in English writing, including challenges in maintaining clarity, proper word order, and handling abstract phrases or complex sentences, highlighting their dependence on translation tools for these aspects. Despite these challenges, a positive aspect emerges—most students express a willingness to actively engage with MT, acknowledging its potential drawbacks on English learning. Therefore, the challenge for language educators lies in effectively guiding them towards achieving this goal in language classrooms. In other words, instructors play a crucial role in alleviating such drawbacks by guiding students appropriately. This involves implementing various strategies to facilitate their proactive use of MT while minimizing its potential drawbacks.

One such approach would be having students reflect on their MT use. For example, by writing a reflection paper on MT usage, students can critically assess their language skills, from vocabulary to sentences or paragraphs. A reflection paper serves important functions such as encouraging critical thinking and metacognition. More specifically, a reflection paper encourages students to critically analyze and evaluate their own experiences and

learning processes (Helyer 2015). Reflecting on the language task prompts them to think deeply about what worked well and what could be improved, by thinking about one's own thought processes. Also, instructors can gain insights into students' understanding, struggles, and perspectives through reflection papers. This feedback can inform teaching strategies and curriculum adjustments.

Alternatively, more structured exercises can be incorporated into the classroom setting. Implementing a system where students document each instance of MT utilization can offer valuable guidance. This form of directed reflection serves to enhance self-awareness by prompting students to consider areas for growth. It encourages them to recognize error patterns in writing on their own and identify strategies for improvement. A sample reflection worksheet, derived from multiple students' reflections including those presented in the results section, is depicted in Figure 1.

Figure 1. A Sample of Reflection Worksheet

Number	Intended meaning (in Korean)	My own attempt (in English)	Revision by MT (in English)	What I've learned
1	카페인은 이점보다 단점이 더 많다고 생각한다.	I think there are more disadvantages of caffeine than the advantages.	I think the disadvantages of caffeine outweigh the advantages.	a new word, "outweigh."
2	나는 집에서 독학했다.	I studied alone at home.	I taught myself at home	a new expression "teach oneself"
3	여러분은 누군가를 열정적으로 사랑해 본적이 있나요?	Love... passion...	Have you ever loved someone passionately?	Using "have+ past participle" form to express someone's experience

Note. The column "intended meaning in Korean" can be blank if a learner starts from an English sentence of their own, not from a Korean sentence. To preserve the potential appearance of Korean students' worksheets, no romanization is provided here.

Such reflection would allow them to integrate new knowledge with their existing understanding, fostering a deeper understanding of the English vocabulary, expressions, and grammar. Furthermore, this practice would enhance student-centered learning integration.

Other awareness-raising classroom activities should be planned in a way that grammar instruction can be integrated with writing practices, particularly focusing on constructing complex sentences. Given that many students expressed the assistance provided by MT in forming intricate sentence structures and mastering grammatical patterns in scripts, incorporating grammar instruction within writing exercises becomes crucial. These exercises can involve the creation of long and complex sentences, incorporating elements like relative clauses. More importantly, students should be encouraged to connect their experiences with the form-concept-function of grammar (Celce-Murcia and Larsen-Freeman 1999) learned in English class, fostering a more comprehensive understanding of grammatical structures in practical contexts. This can be accomplished through a grammar workshop, during which the step-by-step process of constructing sentences for script writing can be shared among both students and the instructor in the class, facilitating collaborative resolution of similar challenging areas.

Considering that students heavily relied on MT for vocabulary lookup or verification, it suggests a need for guidance. For vocabulary learning, encouraging the use of online English dictionaries should be encouraged, serving as a nuanced approach that combines traditional methods with contemporary technology. While not inherently innovative, this method enhances foundational language learning by promoting activities like consulting dictionaries, which offer more comprehensive information than students might be aware of.

In contemporary foreign language instruction, completely prohibiting the use of MT-supported or AI-generated writing is impractical. Instead, instructors should establish explicit rules and guidelines at the beginning of each semester regarding the use of MT in presentation preparation. However, a practice that warrants prohibition is students relying on MT to translate entire scripts from Korean to English. This raises pedagogical concerns as it bypasses critical thinking and language acquisition inherent in writing processes. To address this, a process approach should be adopted so that the instructor can monitor the step-by-step phrases of script writing.

6. Conclusion

This study examined Korean university students' perceptions of the capability of MT tools in presentation script writing and their strategies for using these tools. As the use of MT in creating presentation scripts remains underexplored in research, this study opens the door for investigating students' perspectives on the effectiveness and functionalities of MT tools, as well as the approaches or methods they employ while utilizing them. As the findings revealed that students often rely on MT without proper training, this study emphasizes the pivotal role instructors play in guiding MT usage aligned with course goals, thereby empowering learners to view MT as a supplementary tool in language learning rather than a sole reliance. As suggested in the discussion section, a viable alternative could be to have them submit their reflection and comparative analysis as an appendix to the task. Ultimately, such reflection practices would play a crucial role in promoting active learning, self-improvement, and a deeper understanding of foreign languages. Students learn to analyze how they approach tasks, make decisions, and solve problems, leading to improved metacognitive skills.

This study has limitations that warrant consideration. Most importantly, it relies on students' reflection papers as the main source of data, lacking empirical data on language learning outcomes. While these reflections provide valuable insights into students' perceptions and experiences, it would be beneficial to include empirical data on actual language learning outcomes. To address this limitation, future research could incorporate additional methods to provide a more comprehensive understanding of the effectiveness of instructional strategies.

Regarding the impact of improved machine translation accuracy on language education, Groves and Mundt (2015) once raised the question why learners should invest time and money in foreign language learning when translated texts are easily accessible in the target language for free. Now, the imperative lies in finding effective ways to integrate machine translation as a valuable tool for English learning, especially in environments like South Korea, where low-achieving students often grapple with a pervasive sense of apathy and lack of motivation. This challenge reinforces the significance of educators in addressing these issues and shaping the future of English language education.

References

- Ahn, S. and E.-S. Chung. 2020. Students' perceptions of the use of online machine translation in L2 writing. *Multimedia-Assisted Language Learning* 23(2), 10-35.

- Celce-Murcia, M. and D. Larsen-Freeman. 1999. *The Grammar Book: An ESL/EFL Teacher's Course* (2nd ed.). Boston, MA: Heinle & Heinle.
- Chon, W.Y., G. Shin and D. Kim. 2020. Comparing L2 learners' writing against parallel machine-translated texts: Raters' assessment, linguistic complexity and errors. *System* 96, 102408.
- Clifford, J., L. M. Merschel and J. Munné. 2013. Surveying the landscape: What is the role of machine translation in language learning? *Research in Education and Learning Innovation Archives* 10, 108-121.
- Crossley, S. A. 2018. Technological disruption in foreign language teaching: The rise of simultaneous machine translation. *Language Teaching* 51(4), 541-552.
- Garcia, I. and M. Pena. 2011. Machine translation-assisted language learning: Writing for beginners. *Computer Assisted Language Learning* 24(5), 471-487.
- Gritsay, I. and L. Vodyanitskaya. 2021. Pedagogical technologies of machine translation skills forming on the example of bachelor students specializing in mechatronics and robotics at Don State Technical University. In *E3S Web of Conferences* 273, 6.
- Groves, M. and K. Mundt. 2015. Friend or foe? Google Translate in language for academic purposes. *English for Specific Purposes* 37, 112-121.
- Helyer, R. 2015. Learning through reflection: The critical role of reflection in work-based learning. *Journal of Work-Applied Management* 7(1), 15-27.
- Hutchins, E. 1995. Machine translation: A brief history. In E. F. K. Koerner and R. E. Asher, eds., *Concise History of the Language Sciences: From the Sumerians to the Cognitivists*, 431-445. Oxford: Pergamon Press.
- Im, H.-J. 2017. The university students' perceptions or attitudes on the use of the English automatic translation in a general English class: Based on English writing lessons. *Korean Journal of General Education* 11(6), 727-751.
- Jeong, N.-S. 2021. A study on the effects of machine translators on college students' writing proficiency and affective attitude. *Multimedia-Assisted Language Learning* 24(1), 134-157.
- Jiménez-Crespo, M. 2017. The role of translation technologies in Spanish language learning. *Journal of Spanish Language Teaching* 4(2), 181-193.
- Jolley, J. and L. Maimone. 2015. Free online machine translation: Use and perceptions by Spanish students and instructors. In A. J. Moeller, ed., *Learn Languages, Explore Cultures, Transform Lives*, 181-200. Minneapolis: Central States Conference on the Teaching of Foreign Languages.
- Kim, H.-J. 2022. Benefits of collaborative writing: University students' reflections. *Modern English Education* 23(2), 1-9.
- Klimova, B., M. Pikhart, P. Polakova, M. Cerna, S. Y. Yayilgan and S. Shaikh. 2023. A systematic review on the use of emerging technologies in teaching English as an applied language at the university level. *Systems* 11(1), 42.
- Koehn, P. 2020. *Neural Machine Translation*. Cambridge: Cambridge University Press.
- Lee, E.-N. and H. Yoon. 2010. The effects of writing as a pre-speaking activity on the college students' speaking performance. *English Language Teaching* 22(3), 143-166.
- Lee, S.-M. 2019. Korean college students' perceptions toward the effectiveness of machine translation on L2 revision. *Multimedia-Assisted Language Learning* 22(4), 206-225.
- Lee, S.-M. 2020. The impact of using machine translation on EFL students' writing. *Computer Assisted Language Learning* 33(3), 157-175.
- Lee, S.-M. and N. Briggs. 2020. Effects of using machine translation to mediate the revision process of Korean university students' academic writing. *ReCALL* 33(1), 18-33.

- Murtisari, E., R. Widiningrum, J. Branata and R. Susanto. 2019. Google Translate in language learning: Indonesian EFL students' attitudes. *The Journal of Asia TEFL* 16(3), 978-986.
- Niño, A. 2009. Machine translation in foreign language learning: Language learners' and tutors' perceptions of its advantages and disadvantages. *ReCALL* 21(2), 241-258.
- Niño A. 2020. Exploring the use of online machine translation for independent language learning. *Research in Learning Technology* 28.
- O'Neill, E. M. 2016. Measuring the impact of online translation on FL writing scores. *The IALLT Journal of Language Learning Technologies* 46(2), 1-39.
- O'Neill, E. M. 2019. Training students to use online translators and dictionaries: The impact on second language writing scores. *International Journal of Research Studies in Language Learning* 8(2), 47-65.
- Sheppard, F. 2011. *Medical writing in English: The problem with Google Translate*. *La Presse Médicale* 40(6), 565-566.
- Somers, H., F. Gaspari and A. Niño. 2006. Detecting inappropriate use of free online machine-translation by language students: A special case of plagiarism detection. In *Proceedings of the 11th Annual Conference of the European Association for Machine Translation*, 41-48.
- Tsai, S.-C. 2019. Using Google Translate in EFL drafts: A preliminary investigation. *Computer Assisted Language Learning* 32(5-6), 510-526.
- Vold, E. T. 2018. Using machine-translated texts to generate L3 learners' metalinguistic talk. In Å. Haukås, C. Bjørke and M. Dypedahl, eds., *Metacognition in Language Learning and Teaching*, 67-97. London: Routledge.
- White, K. and E. Heidrich. 2013. Our policies, their text: German language students' strategies with and beliefs about web-based machine translation. *Die Unterrichtspraxis* 46(2), 230-250.

Examples in: English

Applicable Languages: English

Applicable Level: Tertiary