THE IMPACT OF GOOGLE TRANSLATE AND ONLINE DICTIONARIES ON STUDENTS' TRANSLATION: AN ANALYSIS OF TRANSLATION ERRORS AND STUDENTS' PERCEPTIONS IN AN ENGLISH-VIETNAMESE TRANSLATION CLASS

TÁC ĐỘNG CỦA GOOGLE DỊCH VÀ TỪ ĐIỂN TRỰC TUYẾN ĐẾN BẢN DỊCH CỦA SINH VIÊN: PHÂN TÍCH LỖI DỊCH VÀ NHẬN THỨC CỦA SINH VIÊN TRONG LỚP HỌC DỊCH ANH-VIỆT

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Abstract - The study evaluates the use of Google Translate (GT) versus that of online dictionaries (OD) in English-Vietnamese translation. Two groups of students were asked to translate a short English text into Vietnamese, using GT (GT group) or OD (OD group), before performing oral reflections on their translation process. Students' translations were analyzed based on 08 common types of translation errors. GT demonstrated its superiority with a lower total number of errors in the translations of the GT group compared to those of the OD group. In both groups, the most common errors were related to discourse and register. The GT group also demonstrated an ability to produce technically sound translations with fewer technical errors than the OD group. Both tools required post-editing and critical use of the tools' outputs. The findings suggest the need for translation training that promotes critical tool use, post-editing skills, and cultural awareness.

Key words - Machine translation; Google Translate; online dictionaries; translation errors; students' reflections

Tóm tắt - Nghiên cứu đánh giá việc sử dụng Google Dịch (GT) so với từ điển trực tuyến (OD) trong dịch thuật Anh-Việt. Hai nhóm sinh viên được yêu cầu dịch một đoạn văn bản tiếng Anh ngắn sang tiếng Việt, sử dụng GT (nhóm GT) hoặc OD (nhóm OD) trước khi thực hiện phản tư bằng lời về quá trình dịch của mình. Bản dịch của sinh viên được phân tích dựa trên 08 loại lỗi dịch thuật phổ biến. GT đã chứng minh tính ưu việt của mình với tổng số lỗi ghi nhận trong bản dịch của nhóm thấp hơn so với nhóm OD. Ở cả hai nhóm, các lỗi phổ biến nhất đều liên quan đến diễn ngôn và văn phong. Nhóm GT cũng chứng minh khả năng tạo ra bản dịch đúng kỹ thuật với ít lỗi kỹ thuật hơn nhóm OD. Cả hai công cụ đều yêu cầu hậu chỉnh sửa và sử dụng công cụ một cách phê phán. Kết quả nghiên cứu cho thấy đào tạo dịch thuật cần thúc đẩy việc sử dụng công cụ với tư duy phản biện, kỹ năng hậu chỉnh sửa và nhận thức về văn hóa.

Từ khóa - Dịch máy; Google Dịch; từ điển trực tuyến; lỗi dịch; phản tư của sinh viên

1. Introduction

In recent years, the widespread availability of machine translation (MT) tools - especially GT - has significantly changed translation practices and pedagogy. Once regarded merely as an aid, MT is now increasingly integrated into everyday translation tasks, including those performed by students and language learners. The rise of artificial intelligence in language processing has prompted scholars and educators to reconsider the role of GT in translation training, particularly in terms of its impact on translation quality and cognitive engagement.

Proponents argue that GT offers several pedagogical benefits, including enhanced speed, expanded vocabulary access, and improved efficiency in navigating unfamiliar texts [1]. However, critics warn that GT often lacks pragmatic and cultural sensitivity, producing syntactically accurate but semantically inappropriate translations [2]. These limitations are particularly problematic in educational contexts, where students may rely on GT excessively, ignoring the cognitive processes essential for developing translation competence [3]. While numerous studies have compared GT with human translation or professional post-editing, very few have examined how student translators interact with GT in a classroom setting - especially when compared to more traditional support tools such as OD. Moreover, limited attention has been paid to the specific types of errors students make when using GT and how they perceive the tool's effectiveness or limitations in enhancing translation quality.

To address these gaps, this study investigates the impact of GT on English–Vietnamese translation tasks by university students, comparing its effects to those of OD. The research focuses on both quantitative and qualitative analysis of translation errors and qualitative insights from student reflections. Specifically, it seeks to answer the following questions:

1. What types of translation errors have occurred in the process of translating using GT and OD?

2. How do students perceive the benefits and limitations of using GT in their translation process?

By answering these questions, the study aims to contribute empirical evidence to MT in education and to offer practical insights into how GT may be effectively integrated into translation training.

2. Literature Review

2.1. MT and Human Translation

The advent of MT, particularly GT, has sparked considerable academic debate about its implications for translation quality and education. As MT tools grow more advanced and widely used, concerns emerge about whether they serve as helpful aids or pose a risk to the cultivation of human translation abilities. Abdi characterized GT as a double-edged sword, noting that although it can support beginner translators in understanding texts and recalling vocabulary, uncritical reliance on it may weaken their critical thinking and problem-solving skills [1]. This concern is shared by Omar and Gomaa, who warned that excessive dependence on MT might encourage a passive translation approach and impede the development of stylistic and pragmatic awareness [3].

Several empirical studies have compared MT with human translation across different linguistic and cultural contexts. Afshin and Alaeddini, focusing on English–Persian translation, concluded that GT performs relatively well in handling grammatical structures like verb tense but lags in pragmatic adaptation [2]. Similarly, Li, Graesser, and Cai noted that GT frequently generates grammatically correct output that lacks contextual appropriateness, especially in complex or nuanced texts [4].

A critical shortcoming of GT is its handling of culturally embedded content. Mehawesh observed that MT often fails to preserve poetic elements, figurative language, and emotional nuance, resulting in a loss of stylistic richness [5]. These observations align with a wider critique: while GT can produce grammatically smooth translations, it lacks the interpretive depth required for culturally nuanced or stylistically complex content.

In comparison, human translation continues to excel in conveying nuance, tailoring content for specific audiences, and preserving cultural authenticity [6]. However, human translation is not without limitations. It is labor-intensive, time-consuming, and sometimes inconsistent due to individual variation. Li, Ning, and Fang noted that while HT ensures communicative intent, it also suffers from subjective interpretation and limited accessibility, especially for under-resourced languages or in classroom settings [7].

Alongside MT, OD plays a crucial role in language learning and translation by providing nuanced definitions, contextualized examples, and user-oriented digital features such as rapid search and frequent updates. Empirical studies indicate that both teachers and students view OD as indispensable tools for vocabulary learning and translation tasks, particularly due to their efficiency, ease of access, and support for independent learning [8]. Research on translation trainees further shows that OD are frequently consulted for lexical choice, collocation, and meaning verification, shaping learners' translation decisions and strategies [9]. Similarly, Van and Thu report that students perceive OD as especially helpful in translation–interpretation contexts, as they facilitate quick comprehension of source texts and improve confidence in lexical selection [10]. Collectively, these studies explain learners' strong preference for OD over print dictionaries and underscore their growing influence on translation practices in educational settings.

Despite the growing body of research on MT and OD separately, studies directly comparing the effects of GT and OD on translation errors and learners' perceptions remain scarce. It is pedagogically essential to GT with OD because students often use them as alternative supports in the same translation task: GT is frequently treated as a dictionary-like tool for checking meaning and usage, while OD provides lexical information and examples. A GT–OD comparison is therefore more pedagogically meaningful than MT-to-MT comparisons, which largely contrast similar systems. In particular, little is known about how these two tools differentially influence error types in student translations and how learners perceive their respective strengths and limitations. This gap highlights the need for empirical research that examines both translation outcomes and learner perceptions when GT and OD are used as translation aids.

Furthermore, a major gap lies in the lack of experimental, classroom-based studies that observe how students interact with MT tools and/or ODs in real-time translation tasks. Many comparative studies - such as those by Li, Graesser, and Cai [4] - evaluate translation quality using controlled corpora or expert-annotated texts, without observing student behavior or reflection during translation activities. Consequently, little is known about how students use, evaluate, or adapt MT output during the translation process, especially in educational contexts.

Many prior studies lack a structured typology for error analysis, relying instead on holistic scoring or general categories. While some, such as Vasheghani [11], used adequacy and fluency metrics to compare human and MT outputs, such frameworks miss fine-grained distinctions - e.g., between pragmatic, discourse, or register errors - that are pedagogically valuable. In contrast, more detailed error-based taxonomies, such as the one adapted in this study from the Louvain School of Translation and Interpreting, offer diagnostic clarity, allowing educators to identify where and why MT output breaks down. Furthermore, while several works acknowledge MT's errors with style, tone, and register [5], these issues are seldom systematically analyzed or quantified. However, in academic, literary, and formal translation settings, maintaining appropriate register and style is essential - areas where literal MT frequently falls short in conveying the intended message.

Another gap concerns the lack of student-centered process data. Studies, including Omar and Gomaa [3], focus on output comparison but rarely examine student reflections or metacognitive engagement with MT tools and ODs. Reflection activities offer insights into learners' translation logic, their evaluation of GT suggestions or OD meanings, and the cognitive trade-offs between speed and accuracy.

In response to these gaps, the present study investigates the impact of GT and OD on English–Vietnamese translation through an empirical classroom experiment, combining error-based translation evaluation with student reflections.

2.2. Translation Evaluation and Translation Errors

Evaluating translation quality is a central concern in translation studies, particularly in educational contexts where systematic assessment of student performance is essential. Over the decades, several theoretical models have been developed to assess translation quality from both linguistic and functional perspectives. Text typology model suggested by Reiss characterizes source texts into three main types - informative, expressive, and operative - and posits that different evaluative criteria should apply depending on the dominant function of the text [12]. For instance, informative texts require terminological precision, while expressive texts prioritize stylistic fidelity [12]. This function-oriented model brings context sensitivity into translation assessment. Skopos theory by Nord extends the functionalist tradition by emphasizing the intended purpose (*skopos*) of the translated text in the target culture [13]. Unlike traditional models that focus on source-text fidelity, Nord argues that evaluation should be based on how effectively the translation serves its communicative function in the target context [13]. This orientation is particularly valuable in translator training, where the translation brief and intended audience often dictate stylistic and strategic choices [14], [15], [16].

Alongside these functionalist models, corpus-based approaches offer more empirical tools for assessing translation quality. An error classification framework was developed in a meta-survey of 186 corpus-based translation and interpreting studies, categorizing translation errors into eight types, including those related to content, culture, grammar and syntax, lexis and terminology, discourse, pragmatics, and register/style. [17]. Each category represents a key aspect of translation quality, facilitating detailed analysis and serving as a valuable tool for instructional purposes.

2.3. Technology Acceptance Model

The current study also incorporates qualitative data from student reflections to provide the students' perceptions when using tools like GT. The Technology Acceptance Model (TAM), developed by Davis [18], is one of the most influential frameworks used to explain and predict users' acceptance of technology. Rooted in the Theory of Reasoned Action, TAM proposes that two primary factors - Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) - determine a user's attitude toward using a particular technology, which in turn influences their behavioral intention and actual usage. Perceived Usefulness refers to the degree to which a person believes that using a technology will enhance their performance, while Perceived Ease of Use reflects how effortless they believe the technology will be. TAM has been widely applied in educational settings to investigate student interaction with digital tools, including learning management systems, e-dictionaries, and MT tools. In language learning and translation contexts, TAM offers a valuable lens to understand how students evaluate and adopt technological supports based on their efficiency, reliability, and compatibility with academic tasks.

3. Research Methodology

3.1. Research Design

This study adopted a quasi-experimental, between-group design to examine how the use of GT compared to OD affects student translation performance. The design integrates both quantitative (number of translation errors) and qualitative (types of translation errors and student reflections) approaches to gain insights into both product and process dimensions of student translation behavior.

3.2. Participants

The participants were 36 fourth-year students majoring in English at a university in Vietnam during the academic year 2023–2024. At the time of the study (March 2024), all participants were in their 8th semester and had completed all translation-related coursework, including four foundational and advanced translation courses (11 credits) and a translation theory course. This training had prepared them to translate a range of text types, and across these courses, they were encouraged to develop core translation competence by avoiding the use of translation tools as part of skills-focused practice. Their English proficiency was assessed at CEFR level B2, indicating an ability to engage with upper-intermediate to advanced texts.

The experiment was conducted outside their regular translation lessons. The students were randomly assigned into two groups: The GT group (n = 17) translated the entire source text using GT only, whereas the OD group (n = 19) produced a largely human translation, using OD mainly to look up technical terms or unfamiliar words. Students were labelled by number and group (e.g., "S7_GT" means Student 7 from the GT group).

3.3. Translation Task

The translation task featured an IELTS-style reading passage of approximately 300–350 words, focusing on the topic of fashion and society. This text was carefully selected for several reasons. First, its length made it suitable for a 100-minute translation assignment, with participants tasked only with translating the highlighted segments, totaling 207 words. Second, the text's complexity was aligned with the B2 level of the Common European Framework of Reference (CEFR), ensuring it was appropriately challenging for learners at that stage. Based on TextInspector, which is an online tool that quickly analyzes a text's difficulty, the text is rather complex (overall difficulty: 70.83%; Flesch–Kincaid Grade: 13.29; lexical diversity voc-D: 99.85; academic words: 8.37%; sentence count: 12; tokens: 212; B1 words: 17.24%). Though the text reflects advanced language use with complex sentence structures and varied vocabulary, it may not make reading too difficult for B2-level learners who can understand long and complex texts with clear organisation. Furthermore, unlimited time given for the translation task was an advantage for the students in dealing with a complex text.

Finally, the text incorporated a wide array of translation difficulties or allowed the emergence of a variety of translation errors across linguistic domains, making it suitable for a multi-dimensional error analysis.

3.4. Student Reflections

After completing the translation, students were asked to record and submit their oral reflections, commenting on their translation process, encountered problems, and tool usability. These recordings were transcribed and coded thematically using a grounded theory approach. Categories included perceived tool usefulness, ease of use, attitude toward the use of GT and OD, and behavioral intentions.

3.5. Data Analysis

3.5.1. Error Typology

The error classification framework used in this study was adapted from the corpus-based translation approach proposed by Granger and Lefer [17]. Rather than proposing a fixed taxonomy of translation errors, their study emphasizes the identification of recurrent translation problems through the combined use of quantitative corpus evidence and qualitative analysis. Based on this approach, the present study operationalizes these translation problem areas into eight analytical categories, namely Content, Cultural, Grammar & Syntax, Lexis & Terminology, Discourse, Pragmatic, Technical, and Register & Style. This adaptation (Table 1) allows the framework to be applied more systematically in evaluating student translations while remaining consistent with the analytical dimensions highlighted in corpus-based translation studies.

Table 1. *The framework of eight categories of errors*

Code	Error Type	Description	Granger and Lefer's translation problems
CT	**Content**	Distorted or omitted source meaning	Meaning-related problems
CL	**Cultural**	Inadequate translation of cultural references or proper nouns.	Culture-specific and contextual issues
GR	**Grammar & Syntax**	Errors in tense, agreement, structure, or word order.	Morphosyntactic deviations
LT	**Lexis & Terminology**	Inappropriate word choices or terminological misuse.	Lexical and phraseological patterns
DC	**Discourse**	Issues with cohesion, conjunction use, or logical flow.	Textual cohesion and discourse organization
PR	**Pragmatic**	Failure to reflect intended tone, politeness, or implied meaning.	Pragmatic adequacy
TE	**Technical**	Mistakes in punctuation, spelling, and formatting.	Surface-level deviations
REG	**Register & Style**	Inappropriate level of formality or awkward expression despite grammatical correctness.	Register and genre conventions.

3.5.2. Student Reflections

After completing the translation, students were asked to record short oral reflections, discussing their translation process, difficulties encountered, and perceptions of the tool used. These reflections were transcribed and coded thematically using grounded theory methods. This study employed a qualitative thematic analysis approach to examine student reflections on their experiences of OD and GT as translation tools. The analysis followed a deductive-inductive hybrid method, grounded in the theoretical framework of TAM [18], while also allowing emergent themes to surface from the data.

4. Results and Discussion

4.1. Types of Errors

Table 2. *The comparison of types of errors in the English-Vietnamese language pair*

Error Type	GT Group	OD Group
Content (CT)	48	59
Cultural (CL)	34	35
Grammar (GR)	29	48
Lexis/Terminology (LT)	37	47
Discourse (DC)	31	27
Pragmatic (PR)	0	0
Technical (TE)	8	19
Register/Style (REG)	101	97
Total	**288**	**332**

This section presents the quantitative and qualitative findings from the experimental translation task, focusing on the types and frequency of translation errors committed by students in the GT and OD groups. A total of 620 translation errors were identified across all participants, categorized into eight types.

The GT group produced a total of 288 errors, while the OD group produced 332 errors. Although the total number of errors was higher in the OD group, the margin of difference was modest. The most common type of error in both groups was Register and Style (REG). Specifically, the GT group recorded 101 REG errors, slightly higher than the OD group with 97. For example, the phrase *"established a distinctive look"* was translated by 11 GT users as *"thiết lập một diện mạo đặc biệt"*. This expression is grammatically accurate but sounds unnatural in Vietnamese, as *"thiết lập" (establish)* does not typically go with *"diện mạo" (appearance).* GT users tended to choose literal equivalents without considering tone or stylistic appropriateness, leading to awkward expressions throughout their translations. This indicates that while GT helped reduce technical and grammatical issues, students struggled with producing natural and context-appropriate expressions, particularly in maintaining cohesion and stylistic tone.

In contrast, the OD group demonstrated slightly better performance in terms of stylistic choices. For instance, six OD participants translated the phrase *"established a distinctive look"* as *"tạo ra/ tạo nên một phong cách riêng biệt/ khác biệt," (create a different style),* which more accurately captures the contextual meaning and stylistic nuance of the source text. Only one participant (S11_OD) selected the literal equivalent *"thiết lập"* for *"establish,"* whereas others produced alternatives such as *"sáng tạo ra," (create) "xây dựng," (build)* or *"tạo nên," (create),*

demonstrating more flexible lexical choices compared to the GT group. The word *"repulsive"* was more appropriately translated as *"phản cảm"*. A range of synonyms, such as *"khó coi" (translated by S12_OD)*, *"kỳ dị" (translated by S3_OD and S6_OD)*, or *"điều không phù hợp" (bizarre/ weird) (given by S13_OD),* could be found in the OD group's translation work - although not all were contextually accurate, this variation suggests a broader lexical awareness, even if context sensitivity remained an issue.

Discourse (DC) is one of the two categories in which the GT group performed slightly worse than the OD group (with 31 and 27 DC errors, respectively). These errors often stemmed from incorrect use of conjunctions and failure to establish logical relationships between ideas. For example, the conjunction *"while"* was uniformly translated as *"trong khi"* in all 32 GT translations, indicating a contrast. Meanwhile, some OD users correctly translated *"while"* as *"cho nên" (so) (translated by S15_OD)* and *"vì vậy" (so) (translated by S1_OD)* to express a cause-and-effect relationship, demonstrating greater flexibility and contextual understanding of students when using OD as a source of reference.

Content (CT) errors were the second most frequent type for both groups, with 48 mistakes for GT and 59 mistakes for OD, highlighting challenges in accurately conveying meaning. In the GT group, literal and context-insensitive translations led to serious distortions. For instance, the verb *"dress"* was commonly translated by 9 students as *"mặc quần áo"* without acknowledging its figurative meaning in the sentence, which should have been rendered as *"ảnh hưởng đến phong cách ăn mặc của mỗi người" (affect each individual's clothing style)*. While the OD group benefited from a wider range of vocabulary choices, this flexibility appeared to overwhelm some students. The word *"elegance"* was variably translated by S3_OD, S5_OD, S10_OD, and S14_OD as *"vẻ đẹp" (beauty)*, by S15_OD as *"tính cách" (personality)*, or by S11_OD as *"bản sắc" (identity)*, failing to preserve the intended nuance of *"sự sang trọng" (elegance),* which is recorded in most GT's work. Moreover, students in the OD group frequently omitted content. For example, S7_OD did not provide any translation for the whole clause: *"while women plucked or clipped their hairlines to achieve the trendy egg-domed forehead,"* while S11_OD omitted the descriptor *"trendy"* in their translation, leading to incomplete or weakened meanings.

Both groups show comparable figures in Cultural (CL) errors, with 35 errors in the OD group and 34 in the GT group. This suggests that both tools enable students to produce an appropriate translation of cultural terms. Most students were unable to fully explain the cultural references to *"the Hippies"* or *"Flemish artists,"* likely because they were unfamiliar with these concepts and did not recognize their relevance for Vietnamese readers. This indicates a gap in both cultural awareness and translation strategy when using tools like OD and GT. This aligns with prior studies, such as Mehawesh 5], which indicated overreliance on MT could hinder the development of cultural sensitivity.

Grammar (GR) and Lexis/Terminology (LT) errors were more common in the OD group than in the GT group (with 48 and 29 GR errors recorded and 47 and 37 LT errors recorded in the OD and GT groups, respectively). This pattern suggests that GT may offer better grammatical and lexical support, particularly in ensuring grammatical correctness and consistent term usage, which is also acknowledged in many studies ([2] and [4]). For instance, 11 out of 17 students using GT translated the clause *"was forbidden for everyone else to wear"* as *"bị cấm mọi người khác mặc"*. This translation does not follow the rules of passive voice in Vietnamese and fails to properly arrange the subject and verb, showing a lack of awareness of structural differences between English and Vietnamese. Interestingly, although the OD group generated more varied interpretations of this clause, they still struggled to produce an accurate translation, with many versions being lengthy and grammatically awkward. In terms of LT, most students in the GT group consistently translated *"bulging tummies"* (originally used to describe women's chubby bodies) as *"bụng phệ"*, which is quite informal and not appropriate when describing women's appearance features. In contrast, despite more varied vocabulary choices, OD users' word choice seemed to be problematic, such as S4_OD translating *"individuality"* as *"tính cá nhân hóa" (personalization)*, or S5_OD translating *"mourning"* as *"tang chế" (mourning rituals)*, which altered the original meanings or presented redundancy.

In terms of Technical (TE) errors, the GT group made significantly fewer mistakes than the OD group (with 8 and 19 errors recorded, respectively). This demonstrates the advantage of GT over its counterpart in enabling technically sound translations with correct punctuation, spelling, and formatting. For instance, in the GT group, some students, such as S5_GT and S6_GT, produced translations containing some unnecessary characters, but overall their work showed fewer punctuation and spelling issues. In contrast, the OD group exhibited more notable technical errors. S15 used a comma (,) where a full stop (.) was required, affecting sentence boundaries. The same student also made a Vietnamese typographical error, giving the word *"người dẫn"*, which should have been *"người dân"*. These examples suggest that OD users seemed to lack sufficient attention to technical conventions, suggesting a need for proofreading and technical skills.

Finally, Pragmatic (PR) errors were not recorded in either group, likely due to the neutral and informative nature of the selected text. This suggests that both tools were adequate in maintaining the intended tone and politeness level in this particular task.

Although the GT group produced fewer total errors, this numerical advantage primarily stemmed from reduced surface-level mistakes, particularly in GR, LT, and TE categories. This finding corresponds with student reflections, which highlighted GT's efficiency and structural accuracy (as discussed in Section 4.2), indicating that the tool is effective in handling mechanical aspects of translation. Nevertheless, this reliance on automation seems to hinder more meaningful interaction

with the language. The GT group committed a slightly higher number of errors in REG and DC, indicating a lack of awareness of stylistic tone, context-sensitive language, and text-level organization. Literal translations like "*thiết lập một diện mạo đặc biệt*," though grammatically accurate, highlight GT's limitations in producing idiomatic or culturally natural Vietnamese. This reinforces the argument that MT frequently lacks the fluency and stylistic sensitivity of human output, necessitating thoughtful human revision to ensure quality and authenticity. This aligns with many authors, including [3], who noted that excessive dependence on MT may limit the development of sensitivity to style and pragmatic nuance.

Conversely, the OD group, although producing more total errors, exhibited greater lexical flexibility and stylistic range, as reflected in their more varied translations of complex terms like *"repulsive"* and *"elegance"*. This suggests that OD users were more actively engaged in interpreting and customizing their translations, a process that supports critical thinking and metalinguistic awareness. However, this interpretive freedom also led to semantic inaccuracies and inconsistency, particularly in CT and LT categories. Students in the OD group sometimes over-distorted the meanings of words or failed to preserve key nuances, pointing to difficulties in aligning form with intended meaning, especially when faced with multiple dictionary definitions.

Interestingly, both groups struggled similarly in the CL category, with comparable error counts. This indicates that neither tool sufficiently supports the translation of culturally specific concepts, such as *"the Hippies"* or *"Flemish artists"*. These findings underscore the persistent gap in cultural translation strategies when students rely on digital tools with neither proper general nor cultural knowledge nor instructional guidance.

From a pedagogical standpoint, the findings show that while GT supports structural accuracy, it often fails in maintaining style, cohesion, and cultural relevance. In contrast, OD users show more lexical flexibility but struggle with precision, consistency, and proofreading. Both tools require active student involvement and post-editing to ensure quality.

The study highlights the need for targeted instruction to help students improve their translation practices. Specifically, students should be trained to identify common errors associated with each digital tool, apply effective post-editing strategies, and strengthen their cultural and contextual understanding. In addition, they should learn to integrate automated assistance with critical human judgment. Ultimately, developing translation competence involves more than just using digital tools - it requires critical literacy, reflective thinking, and contextual awareness to produce accurate and natural translations.

4.2. Student Reflections on GT and OD

4.2.1. Perceived Usefulness (PU)

Students who used OD consistently reported high perceived usefulness, particularly in supporting accurate translation, expanding vocabulary, and improving contextual understanding. Out of the 18 students in this group, 15 explicitly described dictionaries as helping them produce more precise translations, and 12 mentioned vocabulary improvement as a direct benefit. For example, S1_OD stated, *"Using OD helps me learn new words and improve my vocabulary"*. This suggests that dictionaries should not only be tools for immediate translation tasks but also educational resources that support long-term language development.

By contrast, while students using GT (16 total) recognized its utility for speed and generating rough drafts, only 5 students considered it useful for deeper translation tasks. Most acknowledged its limitations, particularly its inability to grasp nuanced meaning, cultural references, or figurative language. S16_GT, for example, pointed out that the tool's literal approach made it difficult to capture the tone or implications of the source text observed. Thus, while perceived usefulness was present, it was conditional and limited compared to dictionary use.

These findings suggest that while both tools serve as useful starting points, ODs align more closely with educational goals, particularly in fostering lexical development and nuanced comprehension. The higher perceived usefulness of dictionaries may also reflect the way they promote active learner engagement, encouraging students to interpret and refine meaning rather than passively accepting automated outputs.

4.2.2. Perceived Ease of Use (PEOU)

GT was unanimously viewed as very easy to use. All 16 students described it as a fast, simple solution requiring no prior training. All 16 students described it as fast, easy to operate, and user-friendly. For example, S15_GT stated, *"GT is easy to use - it just gives you a translation immediately"*. They pointed out how quickly one could obtain a complete translation by pasting full sentences or paragraphs. However, this ease came with trade-offs. The students had to invest considerable time editing the results, especially when sentences were culturally loaded or structurally complex. 13 students commented that the initial convenience was offset by the effort required in post-editing. S11_GT explained, *"I had to read the original English very carefully, then revise the Vietnamese to match the meaning and tone"*.

For OD users, perceived ease of use varied. 10 students indicated that using dictionaries - particularly English-English sources like Cambridge - required more cognitive effort and time, especially when cross-checking definitions or interpreting advanced terms. S10_OD described this experience: *"It takes a lot of time and effort, especially when I need to look up multiple meanings"*. Despite these challenges, most dictionary users accepted the extra effort as part of a more reliable and educational process. This group viewed dictionary use as an investment in language skills, rather than simply a convenience.

This contrast highlights the tension between convenience and cognitive depth. GT's ease may lead to over-reliance, especially among students with lower

proficiency, while dictionaries demand more effort but foster more sustainable skill development. In teaching contexts, this suggests a need to balance accessibility with training in critical reading and interpretation.

4.2.3. Attitude Toward the Use of GT and OD

The attitudinal responses toward the two tools were markedly different. Among OD users, 14 out of 18 expressed a consistently positive attitude. They perceived dictionaries as reliable, trustworthy, and integral to learning. For instance, S7_OD stated, *"I trust dictionaries more, especially for cultural or idiomatic terms. They give me better control".* Their engagement reflected a strategic mindset, where tools were used thoughtfully and selectively depending on the context.

In contrast, attitudes toward GT were mixed and often skeptical. Although students appreciated its convenience, 11 of 16 users voiced significant doubts about its reliability. S14_GT noted, *"GT can't think like a human. It doesn't understand culture or emotions".* Some, like S8_GT, recommended using it only as a reference: *"It's not suitable for full translations. It should just be a starting point".* This shows that while users initially appreciated the tool for its convenience, continued use led them to notice its limitations and gradually lose trust in it.

Students' attitudes toward these tools mirror their growing experience and awareness of technological shortcomings. Although they are often initially drawn to the convenience these tools offer, they eventually come to value those that offer greater control and clarity. This highlights the crucial role of critical digital literacy in guiding learners from passive use to actively assessing and understanding language technologies.

4.2.4. Behavioral Intention and Actual Usage

In terms of future use, students using dictionaries expressed a high intention to continue using them. 12 students stated they would keep integrating dictionary use into their translation and learning practices, appreciating its dual function as a translator and language learning tool. For example, S18_OD stated, *"Even if it's slower, I'll keep using dictionaries. I learn more that way".*

Conversely, among GT users, only 4 students indicated they would continue relying on it regularly. Most described the tool as a last resort or temporary aid, especially when deadlines were tight. S5_GT said, *"I use it to get a rough idea, but I don't trust it for final work".* Some, like S15_GT, even described the tool as counterproductive: *"Using GT might waste more time because you have to fix so much".*

These responses suggest that students are more likely to continue using tools that enhance learning and accuracy. While GT may address immediate needs, it does not foster long-term confidence. This implies that translation pedagogy should guide learners toward tools that promote self-reliance, skill-building, and metalinguistic awareness.

Overall, while both tools contribute to language support, the TAM framework reveals that deeper learning and greater user confidence are more closely associated with OD. In contrast, GT can lead to shallow engagement if not used critically. These findings point to the importance of instructional support that enables students to balance convenience with thoughtful evaluation. By guiding learners in the effective use of translation technologies, educators can foster more independent and reflective learning - leveraging the benefits of MT while preserving the crucial role of human judgment.

5. Conclusion

This study analyses the error types of students' translation errors and explores their reflections on using OD and GT in translation tasks, applying the TAM. The findings reveal that while GT is valued for its speed and technical accuracy, it often produces translations lacking in stylistic naturalness, discourse cohesion, and cultural sensitivity. OD, on the other hand, fosters greater lexical awareness and active engagement, yet poses challenges in semantic accuracy, consistency, and editing discipline.

Students using OD demonstrated higher perceived usefulness for language development and more positive attitudes toward tool integration, though with increased effort. GT users appreciated its ease of use, but expressed lower trust in its output and relied heavily on post-editing. Error analysis confirmed distinct tool-related patterns: GT helped reduce grammatical and technical mistakes, while OD encouraged diverse but sometimes imprecise lexical choices.

These insights point to the need for explicit instructional support in digital translation literacy. Students must learn not only how to use these tools but also how to critically evaluate, revise, and contextualize their outputs. Ultimately, translation tools should be seen not as substitutes for human reasoning, but as cognitive partners that become truly effective when used by informed, thoughtful learners.

This study has a few key limitations. The study, limited to one academic setting with a small sample, relied on self-reported data and focused on one genre and two tools, excluding others. Its cross-sectional design also missed long-term development. Therefore, future research should consider expanding the sample size and including participants from diverse educational contexts to enhance generalizability. Longitudinal designs tracking students' translation development over time would provide deeper insights into how tool use evolves with experience and training.

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APPENDIX

The text for the translation task was taken from the IELTS reading passage "Fashion and Society" (extracted from an IELTS-reading practice website).

"Every society "dresses" the human body, and the wardrobe plays significant and aesthetic roles everywhere. The colour scheme of clothes often has a special meaning. For instance, a white wedding dress represents purity, while a black wardrobe symbolises mourning for a deceased relative. Uniforms represent affiliation with a specific profession. Purple, the colour associated with monarchies for centuries, was forbidden for everyone else to wear. Of course, clothing has always been used to emphasise an individual's elegance, even if various societies have varied conceptions of beauty. For instance, Flemish artists in the 16th century in Europe praised ladies with long faces, bulging tummies, and bony shoulders, while women plucked or clipped their hairlines to achieve the trendy egg-domed forehead. The fashion industry nowadays views these features as very repulsive.

… Even some unfashionable clothing is a reaction to current fashion trends. Being unfashionable is a revolt against the societal principles of the fashionable, not a choice to disregard fashion. The hippies of the 1960s established a distinctive look using a variety of secondhand clothing, handmade crafts, and army surplus items as a method of rebellion against the squandering of the consumerist society. They objected to the wastefulness of wealth as well as the way mass manufacturing neglected individuality".