

# Integrating GenAI and Corpora in Translation Pedagogy: Effects on Students' Self-Regulated Learning and Engagement

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**Abstract.** Self-regulated learning (SRL) is critical for successful translation performance. However, traditional SRL training struggles to accommodate individual and contextual factors. Generative artificial intelligence (GenAI) has potential for personalized feedback, yet its application in translation pedagogy is constrained by issues such as AI hallucination, training data from unknown sources, and students' uncritical acceptance of outputs. Moreover, AI-supported SRL training has largely focused on reading and writing, leaving translation teaching underexplored. To address this gap, this study investigated how translation students' SRL skills and engagement changed when using AI-Corpora, a translation learning platform integrating GenAI with corpora across three translation tasks. Findings revealed distinct trajectories. The forethought dimension of SRL improved most substantially and early, while performance and reflection dimensions showed delayed but significant gains, particularly in later tasks. Regarding engagement, behavioral engagement progressed steadily and cognitive engagement developed significantly only after basic behavioral competence was achieved. There was a shift from passive acceptance to critical evaluation of AI-generated content. Affective engagement showed the largest improvement. The study highlights the potential of integrating GenAI with corpora to foster SRL and engagement in translation learning, while also underscoring the need to support students' critical thinking and adaptive strategy use to avoid over-reliance

**Keywords:** AI-Corpora, Self-regulated learning, Learner engagement, translation teaching.

## 1 Introduction

Self-regulated learning (SRL) involves learners setting goals and regulating cognition, motivation, and behavior in response to personal and environmental factors [16]. It supports learning outcomes and engagement, especially in student-centered settings [26]. In translation learning, SRL applies across the translation cycle, influencing text interaction and problem-solving for quality outcomes [15]. Engagement, closely linked to

SRL, predicts success in language education [5]. However, traditional SRL training often fails to address individual and contextual differences [7]. Generative AI (GenAI) offers potential through instant, personalized feedback [2], but faces limitations: AI hallucinations, opaque data quality [3], students' uncritical acceptance of AI outputs [19], and lack of structured support for SRL development. Existing AI-based SRL studies focus on reading and writing [13], leaving translation pedagogy unexplored. To address these gaps, this study examines how translation students' SRL skills and engagement evolve using an AI-corpora integrated platform (AI Corpora), and how their self-regulatory behavioral patterns develop, aiming to inform translation instruction and SRL literature.

## 2 Backgrounds

### 2.1 Self-Regulated Learning (SRL) in Translation Teaching

SRL enables learners to manage cognitive, metacognitive, and motivational resources [29]. Most models share three phases: pre-action (planning, goal setting), action (strategy use, monitoring), and post-action (reflection) [14, 21]. In translation, which demands problem-solving and metacognition [18], SRL helps students plan, monitor coherence, and improve strategies [6]. Strong SRL correlates with efficiency, motivation, and translation competence [15; 22]. Explicit SRL training can also boost strategy use, but traditional classrooms face challenges: time constraints and limited personalized guidance (Dignath & Veenman, 2021). GenAI offers personalized support [11], yet research on AI-enhanced SRL in translation education remains scarce.

### 2.2 Learner Engagement in Translation Teaching

Engagement reflects students' concentration and investment, predicting academic success [17]. It consists of distinguish behavioral (participation), affective (interest/emotions), and cognitive (deep processing) dimensions. In translation, these manifest through task engagement, course attitudes, and strategic approaches [23]. Engagement is dynamic, fluctuating across time and tasks [20], which is critical in translation due to sequential competence development. Technology can foster engagement: corpus tools enhance relevance [10], and GenAI provides adaptive feedback [23]. However, research on engagement in translation pedagogy, especially regarding GenAI-corpora integration, remains limited.

### 2.3 Integrating Corpora and GenAI for Translation Education

GenAI enables logical reasoning and content creation, promoting learner autonomy [8]. AI-integrated tools have enhanced engagement and satisfaction in translation [23, 24]. However, concerns include AI hallucination [3], unreliable output due to data from unknown sources, and students' uncritical acceptance of AI content [1]. Human-produced corpora can mitigate these issues by improving reliability and naturalness [3]. AI-enhanced corpora have shown positive effects on motivation and SRL in writing [27, 28].

Yet empirical research on AI-corpus integration in translation learning is lacking. To address this gap, we developed an AI-integrated Corpus Platform combining GenAI with the TR Corpus Platform ([www.tr-corpus.com](http://www.tr-corpus.com)) to support translation teaching and SRL training.

While previous studies suggest that combining GenAI with corpus tools has potential for language teaching, empirical evidence on how AI-powered corpus tools influence students' SRL skills development and engagement in learning translation. To address this gap, this study conducted three-week translation training and examined the following questions:

RQ1: How do students' self-regulated learning (SRL) abilities change before and after the 3-week translation training?

RQ2: How does students' learning engagement in translation tasks change before and after the 3-week translation training?

### 3 Backgrounds

#### 3.1 AI-Integrated Corpus Platform: Design and Functions

The AI-integrated Corpus Platform, named AI-Corpora, was developed by combining the TR Corpus with artificial intelligence. It offers an innovative tool for translation education. It is designed to support all stages of the translation process, from pre-task preparation to post-task refinement, aiming to make translation learning more interactive, data-informed, and learner-centered. The TR Corpus includes a bilingual English-Chinese collection of texts across six genres: news, annual reports, company profiles, feature articles, financial documents, and legal documents. With a substantial volume of 113.56 million English words and 233.95 million Chinese characters, the corpus provides translators, researchers, and educators with extensive, high-quality reference materials and authentic language data.

The AI-integrated Corpus Platform features five key interfaces. Fig. 1 presents the interface of the Search function. Figures for other interfaces are omitted due to page limits.:

1. Search: Enables users to look up translations of specific words across genres, with AI-generated summaries of frequency patterns and representative examples for each translation.
2. Translate: Supports users in completing translation tasks by providing AI-generated drafts, highlighting context-sensitive vocabulary, and suggesting appropriate lexical equivalents.
3. Feedback: Delivers immediate AI-generated feedback and automated error detection to help users improve translation quality.
4. Polish: Allows users to refine and enhance their translations using AI-assisted editing tools.

5. Memory: Functions as a personalized learning archive where users can store and revisit feedback to reinforce learning over time.

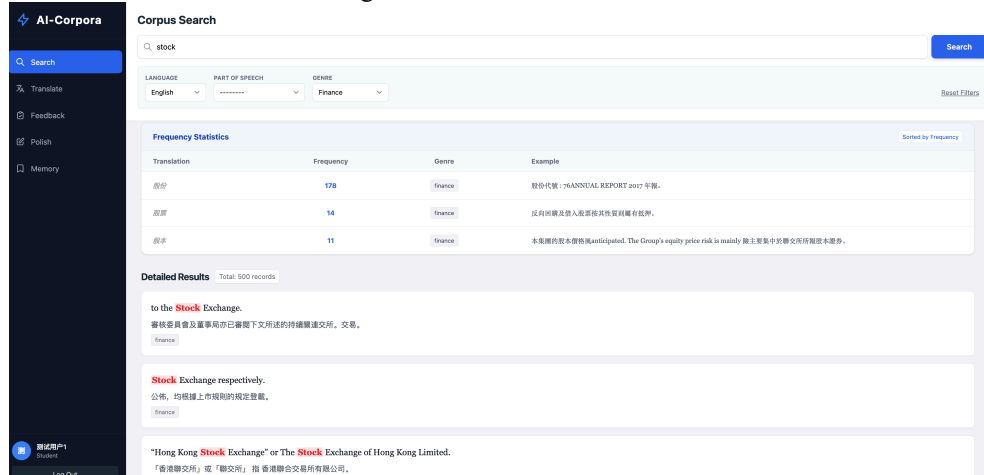


Fig. 1. Interface of Search function.

The platform enhances translation pedagogy by offering learners individualized support for skill development and enabling educators to enrich their teaching practices. It also helps increase student engagement and motivation by making the learning process more responsive and interactive.

### 3.2 Participants

The study was conducted at a university in Hong Kong with a sample of 15 students enrolled in the Master of Translating and Interpreting (MATI) programme. Prior to the experiment, participants completed an online pre-study survey about their backgrounds. They must commit to the full 3-week intervention and all data collection activities and provide informed consent for the recording and analysis of their platform usage data, questionnaire responses, and interviews.

### 3.3 Research procedure and data collection

Participants completed three weekly translation tasks using AI-Corpora. The study adopted a mixed-methods design with three Chinese-to-English tasks (travel article, company introduction, editorial), each completed remotely via Zoom within 50 minutes. Their translation processes were recorded. After each task, participants completed a 30-item Likert questionnaire measuring learner engagement (13 items across cognitive, affective, and behavioral dimensions) and SRL skills (17 items across forethought, performance, and reflection). Following the three tasks, seven participants selected based on questionnaire responses took part in interviews (conducted in Chinese) to share their experiences.

### 3.4 Data analysis

To address the two research questions, this study used a mixed-methods approach. One-way repeated measures ANOVAs were conducted to examine changes across three translation tasks in students' SRL skills (forethought, performance, reflection) and their cognitive, affective, and behavioral engagement through the questionnaire results. A qualitative analysis was then conducted to gain a nuanced, in-depth understanding of the interviewees' cognitive, affective, and behavioral engagement, with the aim of complementing the questionnaire responses. In addition, screen recordings from the three translation tasks were coded using Lau's [9] SRL framework to track how students' interaction with AI-Corpora's five functions reflected evolving self-regulated learning strategies across individual and group levels.

## 4 Current Results

Overall, the findings reveal distinct developmental trajectories across different dimensions of SRL and engagement.

### 4.1 Self-regulated learning

According to the questionnaire results, SRL development showed enhancement in three dimensions (see Table 1). Forethought improved earliest and most substantially between the first two tasks, then plateaued, suggesting strategic planning develops quickly once students master the tool. In contrast, performance and reflection showed delayed but significant gains across tasks. Performance regulation required dual processing (translation + AI integration), which developed gradually. AI-Corpora served as a motivational scaffold, reducing cognitive burden and sustaining persistence. Students' trust in the platform evolved, contingent on text type: AI performed better on informative texts (Tasks 2–3), increasing reliance. However, individual variation persisted—some cross-checked externally, others became dependent. Reflection improved latest (between Tasks 2 and 3), as students needed accumulated experience to review feedback via the Memory function. Importantly, they shifted from tool-focused thinking (understanding functions) to strategy-focused thinking (strategic application to improve quality). These findings contrast with claims that GenAI hinders self-regulation, and align with research on technology-mediated scaffolding. In the next stage, the analysis of screen recordings will be conducted to reveal more details.

**Table 1.** ANOVA result of self-regulated learning.

Dimension	F(2,28)	p	$\eta^2p$	Effect size
SRL_Fore (Forethought)	13.18	<0.001	0.485	Very large
SRL_Per (Performance)	5.51	0.01	0.282	Medium
SRL_Re (Reflection)	3.95	0.031	0.22	Medium

## 4.2 Learner engagement

According to the analysis of the questionnaire and interview, participants' learner engagement improved across behavioral, cognitive, and affective dimensions (see Table 2). Behavioral engagement showed steady progress, particularly in effective platform use. Initial unfamiliarity increased cognitive load, but students later developed procedural fluency. Cognitive engagement developed most significantly between the second and final tasks. Initially, students accepted AI outputs uncritically due to cognitive overload. As they became familiar with the platform, cognitive resources were freed for higher-order processing, enabling knowledge connection and critical evaluation—progressing from passive acceptance to active integration of AI outputs with prior knowledge. Affective engagement showed large improvements across tasks, with positive indicators (enjoyment, perceived helpfulness, motivation) growing through successful interactions. Frustration remained low, suggesting intuitive interface design. Students developed positive emotions as they experienced concrete benefits, rather than depending on initial reactions. These findings highlight that AI-Corpora reduced cognitive load, supported deeper processing over time, and fostered positive affective responses through user-centered design.

**Table 2.** ANOVA result of learner engagement.

Dimension	F(2,28)	p	$\eta^2p$	Effect size
En_B (Behavioral)	4.1	0.027	0.227	Medium
En_C (Cognitive)	4.52	0.02	0.244	Medium
En_A (Affective)	5.89	0.007	0.296	Large

## 5 Contributions and implications

These findings have some practical implications for translation pedagogy. First, the study highlights significant individual variation in how students develop trust and reliance on AI tools. Some students consistently cross-checked AI Corpora suggestions with external resources throughout all tasks, while others were dependent on platform outputs. This variation suggests that educators should encourage students to view AI-powered tools as collaborative partners rather than unreliable substitutes for human judgment. Second, the design of assistant tools in language education should be more user-friendly. Platforms should consider clear navigation, streamlined workflows, and easily accessible help resources, allowing students to focus cognitive resources on translation quality rather than tool operation.

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