International Journal of Linguistics, Literature and Translation
ISSN: 2617-0299 (Online); ISSN: 2708-0099 (Print)
DOI: 10.32996/ijllt
Journal Homepage: www.al-kindipublisher.com/index.php/ijllt

IJLLT
AL-KINDI CENTER FOR RESEARCH AND DEVELOPMENT

| RESEARCH ARTICLE

A Study on Human-AI Collaboration Modes in Lyric Translation from a Translator-Centered Perspective

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| ABSTRACT
With the rapid development of artificial intelligence technology, machine translation has become an important tool for translators to enhance productivity. However, lyric translation, which demands high levels of musicality, poetic sensibility, and cultural adaptability, represents a complex act of artistic recreation. At present, translators lack systematic methodological guidance for using AI in translation, making it difficult to effectively leverage artificial intelligence to improve translation quality. To address this, this study adopts a translator-oriented perspective to construct a human-computer collaborative workflow led by the translator, consisting of three stages: "pre-translation planning and prompting–critical screening during translation–post-translation precise editing and artistic refinement." The paper emphasizes that translators should guide AI in generating draft translations through structured instructions while reinforcing their dual roles as translation project managers and artistic decision-makers during the interaction. By applying this model to the translation practice of the lyrics 《爱在》 its comprehensive effectiveness in coordinating rhythm, transforming imagery, and preserving poetic meaning was validated. The study concludes that the key to improving lyric translation quality in the era of artificial intelligence lies in the translator's mastery of the tool. It provides an actionable methodological framework for lyric translation and offers theoretical reference and practical insights for translation teaching and translator competence development.

| KEYWORDS

Translator-oriented; Human-Computer Interaction; AI Translation; Lyric Translation

| ARTICLE INFORMATION

ACCEPTED: 15 January 2026 **PUBLISHED:** 04 February 2026 **DOI:** 10.32996/ijllt.2026.9.2.17

1.Introduction

In the digital landscape of global cultural dissemination, song translation serves as a crucial pillar for achieving profound cross-cultural resonance in the realm of music. This is an exceedingly intricate process intertwined with artistic recreation and creative transformation, demanding not only accurate conveyance of meaning but also a delicate balance between musicality and poetic imagery under strict rhythmic constraints. Traditionally, this process heavily relies on the individual competence of translators, resulting in low efficiency and a lack of standardization. While generative AI offers effective translation support, it still faces significant limitations in the domain of lyric translation: an insufficient understanding of musical rhythm and difficulties in automatically handling cultural imagery. Currently, translators generally lack a systematic framework, and academia also lacks targeted, structured research in this area.

This study aims to focus on a specific practical issue: in lyric translation, what systematic, operable collaborative method should human translators employ to effectively guide and harness generative AI tools, thereby tangibly improving the comprehensive quality of the final translation in terms of musicality, poetic quality, and cultural appropriateness? The research will construct an analytical framework, reveal practical dilemmas, and propose a translator-led cyclical collaborative model consisting of three

stages: “planning-evaluation-editing”. Its effectiveness will be verified through a case study, providing methodological references and theoretical insights for lyric translation practice and research on translating special genres in the AI era.

2.Literature Review-Main issue and Principles in AI Translation

Currently, many translators have begun integrating generative AI into their lyric translation workflows. As noted, “In the era of digital intelligence, collaboration between humans and machines is an inevitable trend and has become a new type of relationship in human society” (Chen& Pan, 2025). However, a series of systematic dilemmas persist in practice. The most prominent contradiction lies in the mismatch between the translator's desired outcomes and the AI's comprehension capabilities. AI lacks of thinking capacity and initiative. “Literary works possess distinctive qualities—most exhibit unique stylistic features or employ metaphors, among other devices, while AI translations may appear crude and fail to capture the artistic conception of the original text”（LI& Qin，2026）. As a specialized text form, lyrics, like literary works, require the preservation of their artistic conception and the maintenance of the song’s atmospheric quality. A common issue arises when translators input an instruction such as “translate this lyric”—the AI-generated output may be grammatically correct but often fails to reproduce the artistic effect of the original text. This paper argues that the problem does not stem from insufficient AI capability but rather from a misalignment in the collaborative approach. Translators often fall into the dilemma of inaccurate prompting, as their instructions cannot be transformed into precise, structured language commands that machines can effectively execute.

Even when translators strive to provide more specific prompts, the issue of misaligned evaluation persists. When AI processes long sentences, it lacks the analytical capability for segmentation and integration—Chinese requires attention to the logical cohesion of short phrases, while English demands consideration of clause structures and the logical deconstruction of lengthy sentences. The expressive differences between Chinese and English also reduce AI’s sensitivity to linguistic nuance. When multiple versions are generated based on vague requests, translators often face a collection of options that are each with its own strengths and weaknesses.”Translators have evolved from mere language converters to the primary agents of ethical judgment, assuming greater ethical responsibilities throughout the translation process. Particularly when dealing with sensitive issues such as cultural values and ideology, they must actively exercise their subjective agency.” (Wang& Liu,2026) While AI can produce multiple translation variants, it cannot fully achieve equivalence in translation, necessitating continuous revisions by translators who exercise their agency.

Furthermore, during the editing phase, translators often struggle with unclear priorities. When faced with an unsatisfactory initial draft, they tend to fall into the trap of word-by-word revisions, spending excessive effort on adjusting the rendering of a culturally-loaded term while overlooking the fundamental clash between the syllabic structure of the musical phrase and the melody. This misplacement of focus ultimately undermines the coherence of the text as a whole.

To overcome these dilemmas, two foundational principles for human-AI collaboration must first be established. The first cornerstone is the principle of translator agency. “The core competence of human translators lies in translation aesthetic creativity based on critical thinking, reflecting humanity’s holistic and localized capabilities in perceiving and representing society” (Chen& Pan, 2025). This means it must be clear that in artistic translation, AI serves as a powerful, guidable generation tool—not an autonomous creator. The translator acts as the translation project manager, overseeing the translation direction at a macro level, while AI functions as an assistant translator. The second cornerstone is the consistent quality benchmark: the tripartite standard of musicality, poetic quality, and cultural appropriateness. These three are not vague concepts but should be concretized as the basis for every decision in the collaborative process. Any collaboration detached from this tripartite standard is unlikely to produce high-quality lyric translations.

3. Methodology of a Human-AI translation Collaborative

To systematically address the aforementioned human-AI collaboration dilemmas and effectively implement the principle of translator agency, Jiang (2026) found that an ideal collaborative model should transcend mere instruction and execution, focusing more on bidirectional cognitive adjustment and value co-creation. The advantage of machine translation lies in its retrieval capability, while human translation excels in aesthetic sensibility and creativity. This paper argues that the strengths of both machines and humans should be combined by “establishing programmatic mechanisms for defining responsibilities and roles across the three stages of pre-translation, in-translation, and post-translation.” （Zhao, 2025） Translators must guide AI in understanding the creative context while also refining and clarifying their own aesthetic judgments through dialogue with AI. This study constructs a cyclical three-stage collaborative framework centered on professional translators: “Planning – Evaluation – Editing.” This framework reshapes lyric translation from a one-time textual conversion into an iterative, controllable, and art-quality-driven creative project management process.

Stage 1: Planning and Prompting

The core of this stage is to transform the translator's internal, often vague artistic pursuits into precise tasks that AI can comprehend and execute. Translators must shift from being passive recipients of AI output to active "project planners" and "prompt engineers." According to Korzyński et al. (2023), an effective prompt typically consists of three key components: contextual information, specific tasks, and illustrative examples. For lyric translation, the translator must conduct an in-depth analysis of the original song's background, musical style, and lyrical text before translation begins, identifying key features in terms of musicality (e.g., rhythm, rhyme scheme), poetic quality (core imagery, rhetorical devices), and cultural appropriateness (culturally loaded terms, emotional tone). Based on this analysis, the translator constructs structured prompts, typically following this standard paradigm: Role definition – to specify the AI's knowledge domain and stylistic approach; Task context and specific constraints – clarifying the artistic goals and technical parameters to be achieved; Output format requirements – such as requesting multiple versions with different emphases for selection. The significance of Precise planning serves as the starting point for high-quality collaboration, determining the cooperation depth between translator and AI.

Stage 2: Evaluation and Selection

After AI generates preliminary translations (usually multiple versions) based on the plan, the translator must systematically evaluate them against the aforementioned tripartite standard of musicality, poetic quality, and cultural appropriateness. As Yan (2025) notes, modern lyric translation should consider the audience, Apprehension level, keeping the original style, and expression of emotion. Therefore, by summarizing these characteristics, this paper concludes that lyric translation needs to satisfy musicality, poeticity, and cultural adaptation. The key at this stage is to move beyond simple judgments of "right or wrong" and instead engage in critical comparative analysis and creative integration of different translation versions. The translator must horizontally compare the strengths and weaknesses of each version, identifying their highlights and shortcomings in meeting the tripartite standard. Then, much like a director selecting actors or an editor compiling a manuscript, the translator extracts the best elements from multiple AI outputs to form a "composite version" that is superior overall to any single initial draft. This process demonstrates the translator's core agency as both a "quality director" and a "creative decision-maker."

Stage 3: Editing and Iteration

Upon obtaining the composite version, the translator enters the refinement editing stage. To ensure the final realization of artistic standards, editing should follow a clear priority order: "musicality first, then poetic quality, and finally cultural appropriateness." The translator must first ensure that the translation aligns perfectly with the melody in terms of syllables, stress, and rhyme, making it singable. Next, the imagery and phrasing are poetically polished to enhance linguistic beauty and emotional tension. Finally, a comprehensive review is conducted for overall cultural context and idiomaticity. This process is highly iterative: if the edited version still falls short of expectations, the translator can use the current optimal result as a new, improved "example" or "context," return to the first stage to revise the prompt, or directly provide targeted revision instructions in subsequent dialogue, thereby initiating a new round of fine-tuning cycles. This dynamic iterative mechanism transforms human-AI collaboration into a co-artistic creation process that continuously approaches the optimal solution, rather than FI.

4. Discussion

To examine the practical effectiveness of the "planning-evaluation-editing" three-stage collaborative operational framework, this study analyzes the first verse of the Chinese pop song Love In《爱在》 by singer Khalil Fong. This case exhibits the following typical characteristics: the lyrics depict modern urban emotions through everyday scenarios, using colloquial language while embedding a strict rhythmic structure (each line ends with the "ai" sound). They also blend concrete imagery with abstract emotions, posing significant challenges to translation in terms of musicality, poetic quality, and cultural appropriateness.

To clarify the efficiency-enhancing role of this framework, the study established two sets of comparative translations: 1) AI Direct Translation, generated solely using the basic instruction "Please translate the following lyrics," representing the raw AI output without active intervention from the translator; and 2) Human-AI Collaborative Translation, produced in strict accordance with the three-stage framework proposed in this study, with the translator deeply involved throughout the process. The following section will first detail the generation steps of the collaborative translation, and then evaluate the practical effectiveness of the framework by comparing the differences between the two types of translations.

4.1 Implementation of the Methodology

In the planning and prompting phase, the translator did not request a translation directly. Instead, DeepSeek was first utilized to conduct an in-depth analysis of the source text to clarify the lyrical background and core features. The analysis focused on the following three aspects: Firstly, as a modern urban love song, it explores the theme of "the presence and absence of love" through everyday imagery. Secondly, the syllable "ai" in the original lyrics forms a pun with the Chinese word for “love” (爱), suggesting the omnipresence of love; therefore, the English translation needs to attempt to recreate this phonetic coherence in its rhyme scheme. Thirdly, on a poetic level, it is necessary to preserve the narrative scenes constructed by mundane images such as“买菜/炒菜” (buying groceries/cooking) and “阳台/盆栽” (balcony/potted plant). Fourthly, on a cultural level, expressions like "对着啤酒杯等下载”(facing a beer glass, waiting for a download) and “爱在清早打谁的领带” (love is tying whose tie in the early morning) reflect the reserved) and restrained nature of Chinese expressions of love; the translation should convey the cultural specificity of this emotional expression. Based on this analysis, the translator constructed a structured prompt: "Assume you are an expert proficient in Chinese-English pop lyric translation. Please translate the following Chinese lyrics into English, meeting the following requirements: 1) Strive to achieve rhyme or slant rhyme at the end of each couplet to reproduce the rhythmic feel of the original; 2) Maintain a colloquial style and narrative vividness; 3) The key lines “我们都要爱偏偏无法同在/人海/可是呼之却不来” must be translated to convey their deeper meaning. Please provide two versions, one focusing on rhyme, the other on meaning expression."

Proceeding to the evaluation and selection stage, DeepSeek generated two initial drafts based on the instruction. The translator conducted a critical evaluation according to the tripartite criteria of musicality, poetic quality, and cultural appropriateness. Version A demonstrated relatively neat rhymes (e.g., “grace/pace/face”, “away/convey/Day”), but some expressions failed to fully convey the original meaning (e.g., “yet sorrow shades the day” deviated from the Chinese intent). Version B presented imagery more delicately (for instance, in handling “小盆栽”, the choices of "wilted plant" and "dead potted plant" offered more aesthetic appeal than Version A), although its rhythmic quality was slightly weaker. The translator decided to use the rhyme framework of Version A as a base, integrating the more vivid and concrete wording from Version B to form a “composite draft.” Subsequently, the translator input further revision instructions into DeepSeek, generated a new version, compared it with the composite draft, and ultimately selected the optimal translation.

In the editing and iteration stage, the translator performed hierarchical refinement on the composite draft. Priority was first given to musicality, adjusting syllable counts to ensure the auditory effect of the rhymes. Next, poetic quality was enhanced; for example, the straightforward “waiting for downloads” was polished to "as the download nears," using the word “nears” to strengthen the sense of immediacy and poetic quality in waiting. Finally, cultural appropriateness was refined, ensuring expressions like “Love is all around” sounded natural and evoked emotional resonance, avoiding stiff literal translation. During this process, sentences that remained unsatisfactory were resubmitted to the AI, accompanied by specific instructions such as “optimize the rhyme and fluency of this sentence,” undergoing multiple rounds of iterative revision until a satisfactory result was achieved.

4.2 Case Analysis

To visually demonstrate the collaborative effect, this paper compares the final Human-AI Collaborative Translation with two control versions: 1) Version A: Generated directly using the basic instruction “Please translate the following lyrics”; 2) Version B: The human-AI collaborative translation.

Example 1

Chinese: 他为她赶回家走得快。

A: He hurries home for her, walking fast with pride.

B: He hurries home with strides so spry.

The AI direct translation (Version A) exhibits notable deficiencies in both musicality and poetic quality. In terms of musicality, it fails to meet the original text's requirement for rhythmic coherence, lacking an effective rhyme structure in the translation. Regarding poetic quality, the translation introduces the emotional connotation “pride”, which is absent from the original lyrics, thereby deviating from the subtle, objective narrative tone. This constitutes redundant creative elaboration. Without clear artistic instructions, AI tends to produce contextually detached literal correspondence and unnecessary additions.

During the collaborative translation process, the translator implemented targeted interventions to address these issues. By providing the AI with the specific instruction: "Construct a sense of an everyday couple's scene, maintain an 8/8 beat rhythm, ensure end-of-line rhymes, and align the word count of the translation with the beat," the dual requirements of "musicality" (rhythm and rhyme) and "poetic quality" (imagery and tone) were clarified. Guided by this instruction, the collaborative draft selected "strides so spry" to replace the direct translation's "walking fast with pride." The term "strides" conveys greater dynamism and visual impact poetically than "walking" Simultaneously, "spry" rhymes with "by" from the preceding line, strictly adhering to the musicality constraints and significantly enhancing the translation's rhythmic flow for singing.

Example 2
Chinese: 小阳台她拿走死掉的小盆栽
A: On the small balcony, withered plants she clears,
B: On the small balcony, she clears the small pot that withers.

The translation of this lyric line must balance the presentation of an everyday scene with alignment to the musical meter. Although Version A accurately conveys the poetic imagery of withering through the word "withered," it overall fails to match the original song's rhythm and meter, resulting in insufficient musicality.

During the collaborative translation stage, the translator guided the AI with the instruction: Retain the "withered" imagery and adjust the rhyme. However, the AI's output, "she takes the small pot that now rests," did not adhere to the key requirements of the instruction. Not only did it fail to retain "withered" but the word "rests" may evoke connotations of "resting in peace" within the cultural context. While poetic, this deviates from the direct meaning of "dead" (死掉), potentially causing semantic ambiguity and affecting cultural appropriateness. The translator promptly pointed out to the AI the issues with this rendering regarding semantic fidelity and cultural adaptability, requesting corrections. Subsequent adjusted versions met the basic requirements. In the final editing stage, the translator further optimized the verb to "clears." This term accurately conveys the action of "taking away/clearing" while possessing a greater sense of finality and subtle poetic conciseness compared to words like "moves" thereby deepening the poetic expressiveness of the translation in its details.

Example 3
Chinese: 难道爱在不该爱的时候才爱
A: Does love only stir when it shouldn't be found?
B: Does love only feel real when it's not allowed?

In the analysis of translating this lyric line, the AI direct translation and the final human-AI collaborative translation reveal significant differences in the depth of artistic treatment. Version A： "Does love only stir when it shouldn't be found?" meets basic musicality requirements through the rhyme of "stir/found" However, its poetic quality shows clear limitations. The pairing of "stir" and "shouldn't be found" remains at a relatively superficial and static level of description, failing to profoundly convey the core philosophical inquiry of the original line regarding "the contradiction between the authenticity of love and its taboo state." This results in insufficient emotional and intellectual depth in the translation.

During the evaluation and selection stage, based on this assessment, the translator provided the AI with revision suggestions aimed at intensifying the emotional conflict and philosophical depth. After guidance and iteration, the collaborative draft optimized the core expression to "feel real" which directly addresses the essential nature and perceptual experience of love, while "not allowed" clearly points to external social or moral taboos. In comparison, this not only constructs stronger internal conflict and tragic tension in terms of poetic quality but also, in terms of cultural appropriateness, more accurately resonates with the sense of profundity and fate often ascribed to "love in adversity" or "forbidden love" within East Asian cultural contexts. Consequently, it achieves a more complete and self-consistent artistic expression across the three dimensions of musicality, poetic quality, and cultural appropriateness.

4.3 Case Summary

Based on a comparative analysis of the specific examples above, it is evident that the translation produced under the guidance of the human-computer collaborative framework demonstrates systematic improvements in three key areas: in terms of musicality, the translation achieves a more rhymed and singable rhythmic structure; in terms of poetic quality, by reinforcing sound patterns and conveying the implicit meaning of imagery, the language's musicality and the depth of imagery are significantly enhanced;

in terms of cultural appropriateness, by inputting the song's background, an AI-interpreted version is generated, thereby facilitating cross-cultural communication.

This case confirms that through systematic intervention in the "planning-evaluation-editing" process, translators can effectively guide AI to overcome the mechanical and superficial flaws of its initial translations. Translators are no longer mere "proofreaders" engaged in word-by-word revisions but instead become setters of quality standards, directors of generation direction, and creative synthesizers of multi-source materials. By integrating AI's efficient generative and retrieval capabilities with the translator's judgment, this framework produces draft translations whose artistic quality is markedly superior to raw AI direct translation and meets professional standards, offering a practical and feasible pathway toward achieving controllable and efficient improvement in lyric translation quality.

5. Conclusion and Future Directions

In summary, through a systematic analysis of the collaboration process between translators and generative artificial intelligence in lyric translation, this study draws the following conclusions: Current automated direct translations generated by AI still cannot independently accomplish high-quality lyric translation tasks, as they exhibit significant limitations in handling musical rhythm structures, constructing poetic imagery, and adapting to cultural contexts. However, the value of generative AI as an auxiliary tool has been substantiated—it can swiftly provide relevant background information and generate diverse translation approaches, thereby substantially expanding the scope of reference materials and creative possibilities available to translators.

Addressing the challenge of translators struggling to effectively harness AI in lyric translation practice, this study proposes a collaborative framework centered on the translator, encompassing a three-stage process of "planning–evaluation–editing" The effectiveness of this framework was validated through the translation practice of《爱在》. This framework not only provides a systematic response to the question posed in the introduction—" how can translators guide AI"—but also offers an actionable methodological reference for lyric translation pedagogy and practice. It should be noted that this study has certain limitations: the selected case focuses on pop music, without covering more rhythmically complex genres such as rap or opera. Furthermore, the current framework relies heavily on the translator's subjective judgment, and future research could consider incorporating more objective quantitative evaluation tools.

Looking ahead, subsequent research could advance in the following directions: developing specialized prompt template libraries for lyric translation, and constructing intelligent evaluation systems that integrate rhythmic analysis and cultural adaptation indicators. These efforts would promote the evolution of human–computer collaboration models toward greater intelligence and specialization.

Funding: This research received no external funding
Conflicts of Interest:The authors declare no conflict of interest.
Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers.

References

[1] Korzyński, P., Mazurek, G., Krzypkowska, P., & Kędzior, K. K. (2023). Artificial intelligence prompt engineering as a new digital competence: Analysis of generative AI technologies such as ChatGPT. *Entrepreneurial Business and Economics Review*, 11(3), 25–37.
[2] Huimin Yan. (2025). Research on Chinese Translation Strategies of Foreign Lyrics under the Guidance of Functional Equivalence Theory — Taking Country Music Represented by Taylor Swift as an Example. *Studies in Linguistics and Literature, 9* (2), https://doi.org/10.22158/SLL.V9N2P94.
[3] Wang H. S., Liu S. J. (2026). Translation Ethics in the Era of Generative Artificial Intelligence: Deconstruction and Reconstruction. *Foreign Language Research,* (01), 15-24. https://doi.org/10.16263/j.cnki.23-1071/h.2026.01.005.
[4] Zhao, L. C. (2025). Reflection on Ethical Crisis of Translation in the Era of Intelligence. *Journal of Foreign Languages, 48* (06), 115-121.
[5] Chen, W., Pan, J. Q. (2025). 数智翻译时代的译者主体性问题研究——基于审美创造性的译后编辑反思. *Foreign Languages Research*, 42 (03), 84-92+113. https://doi.org/10.13978/j.cnki.wyyj.2025.03.016.
[6] Jiang, L. (2026). Comparative Study of the Terms "Human-Computer Interaction" and "Human-Intelligence Interaction". *China Terminology*, 28 (01), 177-179.
[7] Sun, Y. Y., Huang, Y. F., Wen, S.F. (2025). 生成式人工智能支持下人机协同学习的互动模式分析. *Modern Distance Education Research*, 37 (03), 102-112.
[8] Li, J. F., Qin, W. (2026). Scientific Knowledge Graph Analysis for Translation Research in Artificial Intelligence Era (2015—2025). *Information & Computer*, 38 (01), 60-62.