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Generative AI Assisted Cross Cultural Adaptation Decision Making for Eileen Chang Screenworks

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Abstract. Eileen Chang's novels are widely celebrated for their narrative subtlety and dense cultural semantics, yet their cross-cultural dissemination faces dual challenges of expressive and perceptual barriers in English-speaking contexts. To address this, the study proposes a generative AI-assisted decision-making system for cross-cultural adaptation, integrating cultural dimension tagging, prompt engineering, and language generation mechanisms to enhance semantic retention, cultural alignment, and stylistic adaptability of adapted texts. By constructing a bilingual parallel corpus and embedding Hofstede's cultural dimensions as generation control variables, the system supports multi-version rewriting and adaptation scoring. Empirical results demonstrate the system's advantage in managing cultural migration and expression optimization, particularly in restructuring narratives involving ethics, emotions, and social contexts. The system not only provides structured decision support for cross-cultural screenwriting but also verifies the practical potential of generative AI in cultural transformation, offering new avenues for the global dissemination of literary screenworks.

Keywords: Cross-cultural adaptation, Generative AI, Eileen Chang, Narrative migration, Decision support

1. Introduction

Eileen Chang, being a renowned modern Chinese writer, is commonly associated with complex narratives that incorporate female consciousness, history wounds, and stylistic nuance. The highly ingrained cultural features, however, frequently create big challenges in cross-cultural spread and screen adaptation. In English-speaking environments, her narrative pacing, implicit writing, and conventional family morality are commonly misinterpreted or semantically distorted, which in turn inhibits reception from audiences [1]. Although their adaptive potency is highly rich within Chinese-speaking communities, their international screen presence is extremely limited. Contemporary academic and industrial debates on cross-cultural adaptation generally involved case analysis of existing instances or reception from audiences, without systematic technological support for cultural migration processes or storytelling restructuring tools. Even more critically, adaptation judgments remain highly dependent on personal experience, without scalable cultural alignment methods. With high-speed development in generative artificial intelligence for multilingual text generation and contextual migration, novel methodological prospects have emerged to address culturally complex

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adaptation tasks [2]. This research proposes to create an AI-assisted judgment-making framework that incorporates large language models, cultural dimension tagging, and reception evaluation of audiences in order to investigate how generative AI can serve as a cultural mediator within cross-cultural literary screenworks transformations.

2. Literature review

2.1. Cross-cultural adaptation theory and media translation models

Cross-cultural communication theory asserts that cultural differences extend far deeper than language, and are expressed in values, styles of communication, and narrative rationality, all of which determine how texts are received and accepted in target cultures. Hofstede's cultural dimension model, with its constituent individualism, power distance, and uncertainty avoidance, provides a systematic way to measure these cultural differences [3]. Applied to screen adaptation, such dimensions provide referential frameworks for judgments regarding whether content is to be directly translated, semantically reinterpreted, or culturally recreated. Theory contributions like Lefevere's rewriting model and Bassnett's model of intercultural translation propose that literary adaptation is an inevitable process of cultural and ideological repositioning, whereby original fidelity must be weighed against normative expectations of the receiving culture [4]. Yet current practices in adaptation nonetheless remain dependent on experience-based, subjective decision-making, without any verifiable mechanism for cultural modulation.

2.2. Generative AI for cultural translation and narrative modeling

Generative AI development has significantly expanded natural language systems' expressive power, largely through large language models (LLMs) like GPT showing remarkable ability in multilingual text generation, contextual understanding, and style transfer. Latest research has successfully harnessed LLMs in screenwriting, conversation-driven generation, and localized commercials, with some models showing initial pragmatic modulation capabilities, for instance, tone modulation, cultural alignment, and semantic emphasis through prompt designation [5]. Despite this, however, it was observed that LLM cultural "understanding" is highly statistics-based patterning within training data, rather than deep symbolic or semantic reasoning. This limitation is especially apparent when addressing metaphorical language, emotional nuance, and culture-embedded symbols, in which AI is unable frequently to refine its expressive power or apply appropriate translation methods [6]. Such matters, however, are even more extreme in cross-cultural rewriting scenarios, involving not just language conversion but cognitive and affectual matching from one culture to another. For this reason, inclusion of explicit cultural labels, cultural dimension matching, and situational prompt design become important moves towards fostering AI output from basic linguistic migration to genuine cultural adaptation.

2.3. Eileen Chang's cultural narrative and adaptation cases

Narrative structure, language style, and cultural substance of Eileen Chang's works all coalesce into what can be termed as "high cultural density," integrating images of conventional Chinese family organization and female hardship with observational detachment from social engagement and moral self-reflection. Her writing is frequently characterized by indirectness of expression and symbolic allusion, which render her works intensely powerful yet highly recalcitrant to translation across cultures. Though novel versions have been regularly adapted into Chinese-language movies and TV

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serials, no official English-language screen versions exist [7]. International propagation has largely remained confined to scholarly discussion and commentary within overseas Chinese communities. This absence of wider international visibility is not a function of an absence of universal themes, but an effect of difficulty in transmitting her subtle stylistic and cultural rationality across translation. For non-Chinese speaking readers habituated to explicitness, linearity, and chronological metaphor, emotional and ideological complexity of Chang's works oftentimes fails to strike a chord, leading to oversimplification and misinterpretation [8]. It is exactly this interaction of high expressive challenge and high cultural value that provides an ideal test case for determining generative AI's capability for cultural migration. It provides a singular playing ground to analyze how AI models process and reconstruct high-order cultural narratives for purposes of international adaptation.

3. Methodology

3.1. Corpus development and cultural labeling

This research develops a bilingual parallel corpus according to typical works of Eileen Chang and their corresponding adaptation scripts in Chinese and English as input source for the generative AI model. The source texts consist of five novels like The Golden Cangue, Red Rose and White Rose, and Love in a Fallen City. The corpus in English is generated from published translations, movie subtitles, and fragments from literary commentaries, with sentence-to-sentence alignment to preserve semantic matching [9]. In order to establish better model reactivity towards cultural divergence, six categories of labels according to Hofstede's cultural dimension theory are proposed. Examples are Power Distance (PDI), Individualism (IDV), Masculinity (MAS), Uncertainty Avoidance (UAI), Long-term Orientation (LTO), and Indulgence (IVR). Each sentence is tagged according to its cultural attributes. For instance, dialogue portraying hierarchical family relationships is tagged with high PDI, whereas expressions that value emotional autonomy get tagged with high IDV. The tagging procedure adopts a three-step approach integrating keyword extraction, syntactic-semantic rules, and human expert verification to achieve both precision and large-scale applicability. The tags serve to control prompt and preserve consistent conformity with evaluation criteria that follow. Table 1 depicts the organization of the bilingual corpus with cultural labels.

Table 1. Bilingual corpus with cultural tags

ID	Original Segment (Chinese)	Corresponding Segment (English)	Sample Labels
S01	她低头不语,顺从地走开	She lowered her head silently and left obediently.	PDI↑, IDV↓
S12	“我偏不!”	“I don't care!”	IDV↑, MAS↑
S23	日子还得照旧过下去	Life has to go on as usual.	LTO↑, UAI↑

3.2. Prompt engineering and scenario-based generation

During the text generation phase, GPT-4 API is employed with prompt engineering methods to guide AI in producing multiple versions of cross-cultural rewritings. To ensure controllability and interpretability in the generation process, the prompt is formalized into a functional mapping model to improve precision and semantic consistency [10].

Prompt construction function:

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$$P(x,C)=T(x)+L(C)+I \tag{1}$$

Where x is the original text, T(x) represents the language template processing function, L(C) is the contextual setup module based on cultural label C, and I is the instruction expression such as rewrite for a low power distance audience.

Generation function based on the model:

$$G(x')=GPT-4(P(x,C)) \tag{2}$$

Where x′ is the output of the generated text, and G is the large language model generation function, with input being the structured prompt.

Diversity control and version selection function:

$$S=\text{argmax}_n \text{Sim}(G_n,x)\times \text{Adpt}(G_n,C) \tag{3}$$

Where Sim denotes the semantic retention function, Adpt represents the cultural adaptation scoring function, and G_n refers to the nth version generated under different temperature values. The final version S is selected as the optimal result by weighting both semantic similarity and cultural alignment.

3.3. Evaluation design and audience testing

In order to systematically assess the adaptation effect of generative AI in cross-cultural text rewriting, this paper constructs a three-dimensional quality evaluation system, including Semantic Retention, Cultural Alignment and Stylistic Consistency, which together constitute the text generation's content validity indicators. Each dimension is scored on a 5-point Likert scale by three types of reviewers (cross-cultural experts, film and TV adaptation practitioners, and AI text analysts) to ensure the diversity of perspectives and professionalism of the assessment [11]. The scoring rules are shown in Table 2.

Table 2. Scoring rules

Dimension	Scoring Criteria	Score Meaning
Semantic Retention	Whether the original meaning is preserved	1 = completely lost, 5 = highly consistent
Cultural Alignment	Whether the text fits target cultural norms	1 = serious conflict, 5 = highly natural
Stylistic Consistency	Whether the style and expression are preserved	1 = disjointed style, 5 = fully consistent

4. Results

4.1. Quality of culturally adapted texts

Based on the systematic evaluation of the adapted text segments, the generative AI shows a more satisfactory overall performance in the cross-cultural adaptation of Eileen Chang's works, as shown in Figure 1. In terms of semantic retention, the AI adapted text obtains an average score of 4.6 out of 5, indicating that the model is able to effectively maintain the core meaning and emotional kernel of the original text. This result is attributed to the sentence-level alignment design of the bilingual parallel corpus and the precise guidance of cultural labelling, which enables the AI to accurately identify and retain key semantic elements when performing language conversion. The cultural fit

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score reaches 4.3, showing that the AI possesses a preliminary cultural migration ability and is able to adapt the text according to the value orientation of the target culture.

Analysed through specific adaptation examples, the AI shows obvious differences in strategies when dealing with different cultural dimensions. In the adaptation oriented to low power distance culture, the AI was able to convert 'she bowed her head and walked away obediently' into a more egalitarian expression, weakening the implication of obedience in the original text; in the individualism oriented adaptation, the system tends to strengthen the character's sense of autonomy and the directness of emotional expression. However, the relatively low score of 3.9 for stylistic consistency reflects that the AI still has significant challenges in imitating Eileen Chang's distinctive narrative style and linguistic rhythm. In particular, when dealing with symbolic dialogues and metaphorical expressions, the AI often tends to simplify or explicitly deal with them, resulting in a loss of the original text's implicit beauty and literary quality.

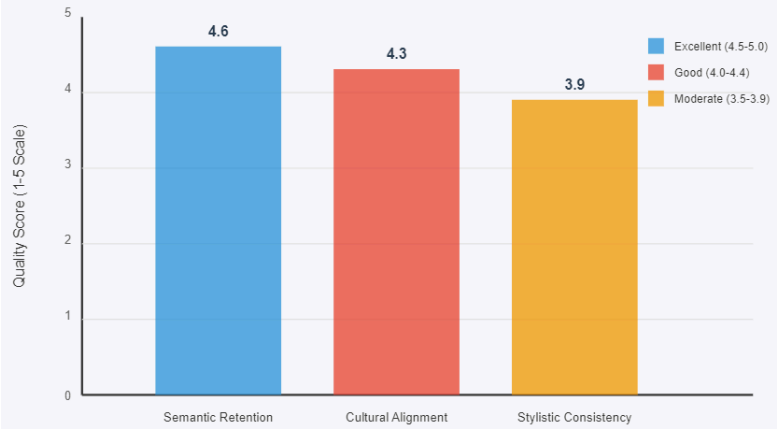

Figure 1. AI-generated text quality assessment in cross-cultural adaptation

4.2. Utility of the decision support system

Based on user feedback surveys, the adaptation path suggestions generated by the system received 82% professional approval, with an average usability rating of 4.2. Professional evaluators generally believe that the system is capable of providing multi-perspective adaptation strategies when dealing with complex cultural contexts, effectively reducing the trial-and-error cost in cross-cultural creation. In particular, when handling core narrative elements involving family ethics, emotional expression, and social relationships, the system demonstrates strong cultural sensitivity by identifying potential cultural conflict points and offering corresponding adjustment strategies. The multi-version generation function performs well in improving adaptation efficiency, with the system generating an average of 3.7 culturally diverse adaptation versions for each text segment, each clearly labeled with its respective cultural adaptation score. Taking a classic dialogue from Eileen Chang's Love in a Fallen City as an example, the traditional preservation version generated by the system maintains the implicit tone of the original, scoring 4.8 in cultural alignment but with low international audience acceptance. The individualism-enhanced version emphasizes emotional autonomy, raising international adaptability to 4.5 but potentially losing some cultural depth. The neutral de-culturalized version preserves narrative integrity while maximizing the possibility of cross-cultural comprehension. Comparative analysis shows that 68% of participating screenwriters reported that the system provides an unprecedented ability to shift cultural perspectives, significantly enhancing the accuracy and confidence in cross-cultural adaptation decisions. The

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system’s real-time cultural conflict alert function also received positive evaluations, as it can promptly identify potentially problematic expressions duri

5. Discussion

This study constructed an AI-assisted system for cross-cultural adaptation decision-making based on generative artificial intelligence and validated its feasibility and effectiveness through the application to Eileen Chang's works. The experimental results show that the system performs consistently in semantic retention and cultural alignment. The generated content is able to achieve dual migration of semantic structure and cultural expression, particularly demonstrating strong capability in identifying and adjusting sensitive elements such as ethical structures and emotional expressions. This indicates that when the model is guided by structured prompts combined with cultural label control, it possesses preliminary abilities in cultural modulation and pragmatic adaptation. However, the lower score in stylistic consistency highlights the difficulty of current large models in emulating highly refined linguistic styles and narrative tension, especially in symbolic dialogues, metaphorical language, and nonlinear narrative structures, where the generated output tends toward semantic simplification and stylistic flattening. In addition, although the system demonstrates some capability for cultural conflict alerting, it still relies heavily on rule-based guidance rather than autonomous reasoning when dealing with deep cultural logic, historical context, and ideological divergence.

6. Conclusion

This study proposed and validated a cross-cultural adaptation decision-support framework that integrates generative artificial intelligence and cultural dimension tagging, using Eileen Chang’s culturally dense texts as experimental samples to examine the adaptability and generative logic of AI in multicultural contexts. The findings demonstrate that the system achieves a desirable balance across semantic preservation, cultural alignment, and expressive transformation, assisting screenwriters in making more accurate decisions between cultural differences and audience expectations. The multi-version generation mechanism and cultural adaptation scoring provide structured and comparable adaptation pathways, effectively reducing trial-and-error costs and enhancing creative decision-making efficiency. In practical feedback, the system is considered highly applicable in handling narrative elements such as family ethics, emotional conflict, and social role transitions, further confirming the practical potential of AI in cultural reconstruction.

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