ESSAYBENCH: Evaluating Large Language Models in Multi-Genre Chinese Essay Writing

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Abstract

001 Chinese essay writing and its evaluation are critical in educational contexts, yet the capabilities of Large Language Models (LLMs) in this domain remain largely underexplored. Existing benchmarks often rely on coarse-grained text quality metrics, largely overlooking the structural and rhetorical complexities of Chinese essays, particularly across diverse genres. To address this gap, we propose ESSAYBENCH, a multi-genre benchmark specifically designed for Chinese essay writing across four major genres: Argumentative, Narrative, Descriptive, 013 and *Expository*. We curate and refine a total of 728 real-world prompts to ensure authenticity and meticulously categorize them into the Open-Ended and Constrained sets to capture diverse writing scenarios. To reliably evaluate 017 generated essays, we develop a fine-grained, genre-specific scoring framework that hierarchically aggregates scores. We further validate our evaluation protocol through a comprehensive human agreement study. Finally, 023 we benchmark 15 large-sized LLMs, analyzing their strengths and limitations across genres 024 and instruction types. With ESSAYBENCH¹, we aim to advance LLM-based Chinese essay evaluation and inspire future research on improving essay generation in educational settings.

1 Introduction

Large Language Models (LLMs) (Brown et al., 2020; Touvron et al., 2023; Team., 2023; Team, 2023) have achieved impressive results in text generation, with growing applications in education, including automated writing support and feedback (Gao et al., 2024). Among these tasks, essay writing plays a central role in language learning and assessment (Venkatraman et al., 2025; Miura et al., 2025; Wen et al., 2025). However, the lack of robust evaluation frameworks for generated essays



Figure 1: Comparison between coarse-grained evaluation methods (a) and our fine-grained and genre-oriented framework for ESSAYBENCH (b).

limits the development and deployment of LLMs in real-world educational settings (Kim et al., 2025).

As shown in Figure 1, current predominant LLM-as-a-judge strategies (Zheng et al., 2023; Li et al., 2025) for assessing texts mainly fall into two paradigms. One relies on meta-evaluation to judge response quality in terms of fluency, relevancy, coherency, readability, and hallucination (Liu et al., 2023; Chen et al., 2023; Hashemi et al., 2024; Fu et al., 2024), while the other employs downstream tasks (e.g., question-answering) as proxies for measuring informational richness and accuracy (Tan et al., 2024; Que et al., 2024; Lee et al., 2025). Although these methods yield valuable insights, they exhibit two fundamental weaknesses. First, the evaluation criteria remain overly coarse-grained, i.e., current LLMs consistently achieve high scores in fluency, relevancy, and coherency (Gu et al., 2025), making it difficult to reveal failure modes or specific weaknesses. Second, existing evaluation methods fail to capture the unique characteristics

¹https://anonymous.4open.science/r/EssayBench-2B14

Panahmank	enchmark Num.		t Compositi	ion	Evaluation Method			
Deneminar K	Inuill.	Domain	Language	Constraints	LLM	F.G. Traits	Scoring	
C-Eval (Huang et al., 2023)	13,948	General Tasks	ZH	×	×	×	-	
AlignBench (Liu et al., 2024b)	683	General Tasks	ZH	×	1	×	Direct	
LongBench-Write (Bai et al., 2024)	120	General Writing	ZH&EN	×	 Image: A set of the set of the	×	Direct	
HelloBench (Que et al., 2024)	647	General Tasks	EN	×	1	×	Weighted	
WritingBench (Wu et al., 2025)	1239	General Writing	ZH&EN	\checkmark	1	×	Direct	
ESSAYBENCH (Ours)	728	Essay Writing	ZH	 Image: A second s	 Image: A second s	1	Weighted	

Table 1: Comparison of ESSAYBENCH with other benchmarks in terms of size, composition, and evaluations.

of essays like logographic characters, complex constructions, and rhetorical traditions, although several benchmarks like *AlignBench* (Liu et al., 2024b) and *WritingBench* (Wu et al., 2025) have turned attention to evaluating general Chinese writing.

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Moreover, Chinese literary and expository practices differ markedly across genres: argumentative essays demand logical structure and persuasive rhetoric (Wachsmuth et al., 2017); narratives require compelling plot development and character voice (Somasundaran et al., 2018); descriptive writings emphasize vivid imagery and sensory detail (McCarthy, 1998); and expository passages call for clarity, organization and factual precision (Balepur et al., 2023). However, existing evaluation frameworks largely overlook genre-specific criteria, limiting their ability to reflect the nuanced demands of Chinese essay writing. This motivates our central research question as follows:

How can we reliably assess the quality of LLMgenerated Chinese essays in ways that truly reflect genre-specific conventions?

In this paper, we introduce ESSAYBENCH, a finegrained and multi-genre benchmark tailored for Chinese essay writing. ESSAYBENCH covers four widely recognized genres in Chinese education: Argumentative, Narrative, Descriptive, and Expository writing. To ensure alignment with real-world educational scenarios, we collect and manually refine a total of 728 essay prompts. These prompts are further categorized into two types based on their instruction style: Open-Ended and Constrained, allowing us to examine LLMs' behavior under different writing conditions, as introduced in Section 2. Additionally, to overcome the limitations of existing evaluation methods for Chinese essay writing, we propose a fine-grained and genre-oriented evaluation framework, as shown in Figure 1. We define

multiple evaluation traits with hierarchical dependencies based on their complexity, ranging from basic to advanced requirements for each essay genre. For each trait, we design targeted sub-questions that reflect genre-specific writing expectations at different levels. To account for the hierarchical nature of these traits, we further introduce a dependencyweighted score aggregation strategy to better capture the writing quality, as introduced in **Section 3**. 097

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We conduct two key experiments to validate the proposed framework. First, to assess its effectiveness and robustness, we perform a comprehensive human agreement study and a quality sensitivity analysis. The results demonstrate that our evaluation protocol aligns closely with human judgments, especially when applied to more advanced LLMs. More importantly, it significantly improves the ability to distinguish essay quality across high-, medium-, and low-level responses (See Section 4). Second, we benchmark 15 large-scale LLMs on the Chinese essay writing using our framework, offering detailed comparisons of their capabilities in writing Chinese essays (See Section 5).

In Table 1, we highlight the key differences between our work and existing approaches. In summary, our main contributions are as follows:

- We present ESSAYBENCH, a multi-genre benchmark tailored for Chinese essay writing, covering *Argumentative*, *Narrative*, *Descriptive*, and *Expository* genres. The benchmark is curated from real-world scenarios and is suitable for practical use in educational applications.
- We propose an effective and robust evaluation protocol for Chinese essays that aligns closely with human judgments and greatly improves the ability to distinguish essays of varying quality.
- We benchmark 15 widely used large-scale LLMs to evaluate their strengths and weaknesses in Chinese essay writing, and highlight areas for future improvement.



Figure 2: Overview of the ESSAYBENCH dataset curation, representative prompts, and the evaluation framework.

2 ESSAYBENCH Dataset

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ESSAYBENCH originally contributes to developing the datasets specifically tailored for Chinese Essay Writing. While prior benchmarks (Wu et al., 2025) have largely provided queries on creative writing tasks in general domains, they do not adequately capture the structure, purpose, and constraints of formal essays, particularly within educational and academic contexts. To effectively benchmark the essay generation abilities, ESSAYBENCH introduces a comprehensive set of essay prompts that span four major and widely recognized genres in Chinese writing instruction (Chadbourne, 1983): Argumentative, Narrative, Descriptive, and Expository essays, which cover the majority of Chinese prose compositions in educational settings. Furthermore, to support comprehensive evaluation, we categorize prompts into two distinct sets based on their multiple constraints. In this section, we describe the essay prompt construction process in detail, including data collection and quality control, and the two-phase query categorization procedures.

2.1 Prompt Collection

160As shown in Figure 2, to reflect real-world usage161and align with educational settings, we choose to162collect prompts from practical and authentic re-163sources. Specifically, we collect data from two pri-164mary resources, namely 1) real-world user queries165obtained through online chatbot interactions, re-

flecting informal and user-generated prompts in tutoring or self-study contexts. 2) educational examination materials, including official Chinese essay prompts, represent standardized and curriculumaligned writing tasks used in formal assessments.

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2.2 Prompt Filtering

Building on the collected prompts from these two sources, we construct a broad candidate pool containing several thousand raw entries. To ensure the quality and representativeness of the datasets, we implement a multi-step filtering pipeline. First, we apply heuristic-based rules to remove irrelevant and low-quality prompts. We then employ clustering methods (e.g., *K*-means (Hastie et al., 2009) with elbow method) to detect and eliminate duplicate or near-duplicate entries. To further enhance prompt diversity, we compute pairwise ROUGE-L scores between prompts and retain only those pairs with a similarity score below 0.7 (Jiang et al., 2024). In this stage, we get over 1000 relative prompts covering essay writing.

2.3 Prompt Categorization

To better evaluate how LLMs perform at different levels of writing difficulty, we divide the prompts into two subsets: *Open-Ended* and *Constrained*. To support this categorization, we first analyze the collected prompts and define five key factors that influence writing complexity and reader expectations: (1) Genre Specification. Each prompt clearly

defines the target genres, including argumentative, 195 narrative, descriptive, or expository, which guide 196 the structural and rhetorical style of the expected re-197 sponse. (2) Topic Specification. Prompts indicate a 198 central topic that the essay should focus on. For example, an argumentative prompt may require elaborating on a specific viewpoint, while an expository prompt asks for the introduction of a particular object or concept. (3) Content Constraints. These constraints specify required elements or themes within the essay. For instance, an argumentative prompt may instruct to include a historical example. (4) Length Requirements. Some prompts include 207 explicit word or paragraph limits, adding structural 208 constraints that impact the planning and execution 209 of essay writing. (5) Target Audience. Prompts may specify the intended readership, such as mid-211 dle school students or readers of a children's lit-212 erary magazine, influencing the tone, vocabulary, 213 and complexity of the writing. In particular, each 214 prompt explicitly specifies both the writing genre 215 and the topic, ensuring clarity in the contents.

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Building on the above-mentioned factors, we categorize each prompt into the either set based on the presence of constraints beyond the genre and topic, i.e., prompts in the Open-Ended set include only basic instructions (genre and topic), while those in the Constrained set contain additional requirements, such as length, content focus, or stylistic constraints. To perform this classification, we adopt a hybrid approach that combines rule-based parsing with LLM-based analysis. Specifically, rule-based methods are applied to identify explicit length constraints, while LLMs are used to detect more nuanced elements, such as topic- and contentrelated restrictions. All prompts are then manually reviewed by the authors to correct any misclassifications and ensure the overall consistency and quality of the dataset. After manual curation, we totally get 728 prompts that capture a wide range of topics, genres, and instructional objectives in real-world Chinese writing tasks. The statistics of the dataset are shown in Figure 3.

3 ESSAYBENCH Evaluation Protocol

In this section, we present the design of our evaluation framework for assessing Chinese essays. Due to the open-ended and reference-free nature of essay writing, we adopt the LLM-as-a-judge paradigm (Chen et al., 2024; Gu et al., 2025) as our evaluation approach. Despite its growing popular-



Figure 3: Dataset Statistics. Note that **Open** denotes Open-Ended sets, **Cons.** refers to Constrained sets.

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ity, existing protocols for evaluating essay generation remain insufficient, particularly in the context of Chinese writing, which involves distinct linguistic features and culturally rooted rhetorical conventions (Liu et al., 2024a). To meet these evaluation needs, we propose a genre-oriented, fine-grained, and dependency-aware evaluation framework for ESSAYBENCH, capturing structural, linguistic, and hierarchical aspects of Chinese essays.

Genre-Oriented Evaluation. In practical essay evaluation, the criteria for assessing quality often vary across genres, as different genres emphasize distinct aspects of writing based on their inherent characteristics. As a result, our framework is adapted to different genres accordingly. Following the principal rubrics outlined in (Blanchard et al., 2013; Hamner et al., 2012), we refine and construct genre-specific evaluation traits that align with Chinese writing conventions. Specifically, we define six genre-specific evaluation dimensions, each designed with expectations that range from basic to advanced requirements, as detailed in Appendix A. This setup allows our framework to effectively capture the distinctive features of different essay types and evaluate essays across varying quality levels.

Fine-Grained Evaluation. Existing methods to evaluate individual dimensions typically rely on direct scoring or binary questions (Que et al., 2024), but these approaches are often limited by their coarse granularity (Kim et al., 2025). Inspired by the multi-trait evaluation design (Lee et al., 2024), we introduce a set of sub-questions (q_i) under each evaluation dimension to enable more nuanced assessments (See Appendix B). We adopt the Chainof-Thought (CoT) (Wei et al., 2023) prompting

Methods	Ove	erall	Argum	entative	Narı	ative	Desci	riptive	Expo	sitory
Wethous	ρ	au	ρ	τ	ho	au	au	ho	$ \rho$	au
					DeepS	eek-V3				
Align-Score	0.674	0.599	0.744	0.674	0.635	0.559	0.656	0.580	0.656	0.578
Ours w/o WT.	0.646	0.529	0.701	0.576	0.596	0.464	0.778	0.672	0.509	0.405
Ours	0.667	0.549	0.670	0.546	0.648	0.518	0.796	0.676	0.554	0.458
					GP	T-40				
Align-Score	0.628	0.546	0.587	0.516	0.582	0.514	0.642	0.563	0.700	0.594
Ours w/o WT.	0.706	0.596	0.747	0.643	0.747	0.645	0.688	0.576	0.643	0.520
Ours	0.733	0.627	0.754	0.662	0.773	0.658	0.700	0.594	0.707	0.601
					DeepS	eek-R1				
Align-Score	0.749	0.667	0.745	0.667	0.764	0.695	0.709	0.617	0.778	0.686
Ours w/o WT.	0.803	0.685	0.789	0.648	0.830	0.719	0.817	0.702	0.785	0.669
Ours	0.816	0.704	0.795	0.673	0.838	0.724	0.839	0.731	0.791	0.690

Table 2: Comparison of human agreement evaluation across different scoring methods on sampled data. ρ refers to Spearman's ρ , τ denotes the Kendall's τ , while *WT*. represents the dependency-based weights.

technique to guide LLMs in analyzing responses and identifying linguistic evidence in support of the assigned scores. The final score for t-th dimension S_t is computed by aggregating the scores of the corresponding sub-questions as $S_t = \sum q_i$.

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Dependency-Aware Evaluation. Many existing works determine the overall response quality by simply summing or averaging the scores of individual dimensions. However, based on our observations and preliminary experiments, we find that hierarchical traits contribute unequally, and treating them independently often fails to capture nuanced features in high-quality essays. To address this limitation, we propose a dependency-aware scoring approach inspired by (Saaty, 1980; Žižović and Pamucar, 2019), which assigns weights to each trait based on its position in the evaluation hierarchy. For example, traits at the base level are assigned a depth (d) of 0, while mid-level traits have a depth of 1. The weights (W_t) are computed using Equation 1, with the hyperparameter α controlling the importance of basic and advanced levels. The final score is a weighted sum of all trait scores.

$$W_t = \alpha^d. \tag{1}$$

4 Human Agreement Evaluation

To validate the effectiveness of our evaluation protocol, we conduct a comprehensive human agreement study in Chinese essays. Specifically, the study focuses on two aspects: 1) **Ranking Agreement**, which measures how closely the rankings produced by our evaluation framework align with human judgments; and 2) **Sensitivity Evaluation**, which assesses the robustness of the framework in distinguishing essays of varying quality.

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4.1 Experiment Setup

Datasets. We randomly sample 80 prompts across different categories, selecting ten prompts per genre per difficulty level. For each prompt, we evaluate essays generated by seven language models, including both open- and closed-source models: LLaMA-3.1-70B-Instruct (Meta, 2024), Qwen-2.5-72B-Instruct (Qwen, 2025), GPT-3.5-turbo (Brown et al., 2020), Claude-3.5-Sonnet (Ouyang et al., 2022), Deepseek-v3 (DeepSeek-AI, 2025b), Grok-3 (xAI, 2025), and GPT-40 (OpenAI, 2024). We then recruit 14 professional annotators with rich backgrounds in Chinese linguistics to assess the generated essays. To ensure reliability and consistency, we adopt a pairwise comparison annotation method (Wen et al., 2024), assigning each essay pair to three annotators. In total, the annotation process results in 5,040 labeled data. Finally, in Table 4, a Fleiss' Kappa Agreement (Fleiss, 1971) is used to measure the agreements among three evaluators to ensure the annotation quality.

Baselines. As the first to propose an evaluation protocol specifically tailored for Chinese essay writing, we compare our method against two baseline approaches: (1) **Align Scoring** (Liu et al., 2024b) from AlignBench, which evaluates general Chinese writing quality, particularly, we slightly modify it to evaluate reference-free essays; and (2) **Ours w/o Weights**, which applies the same evaluation rubrics as our method but without dependencybased weighting.

Judges. To verify how well the proposed eval-

Method	DeepSe	ek-V3	Г-4о	DeepSeek-R1			
Methoa	$U_p \uparrow$	$MD_{std}\uparrow$	$ U_p \uparrow$	$MD_{std}\uparrow$	$U_p \uparrow$	$MD_{std}\uparrow$	
			high&n	nedium			
Align-Score	$0.56_{< 0.05}$	$0.17_{0.62}$	$0.56_{=0.14}$	$0.25_{0.84}$	$0.64_{=1.43}$	$0.42_{0.77}$	
Ours	$0.57_{< 0.10}$	$0.24_{0.74}$	0.66 <0.05	$0.45_{1.05}$	$0.79_{< 0.05}$	$0.70_{0.79}$	
			mediur	n&low			
Align-Score	$0.90_{< 0.05}$	$1.42_{1.26}$	$0.87_{< 0.05}$	$2.16_{1.48}$	$0.93_{< 0.05}$	$1.98_{1.05}$	
Ours	$0.78_{< 0.05}$	$1.96_{1.41}$	$0.93_{< 0.05}$	$2.46_{1.42}$	$0.97_{< 0.05}$	$2.79_{1.32}$	
			highd	&low			
Align-Score	$0.92_{< 0.05}$	$1.66_{1.41}$	$0.93_{< 0.05}$	$2.41_{1.35}$	$0.97_{< 0.05}$	$2.41_{1.06}$	
Ours	$0.82_{< 0.05}$	$2.13_{1.42}$	$0.98_{< 0.05}$	$2.90_{1.41}$	$0.99_{< 0.05}$	$3.49_{1.37}$	

Table 3: Comparison of sensitivity analysis results between baselines and our proposed evaluation method, with the best-performing scores highlighted in bold. p denotes statistical significance, and std indicates standard deviation.

	Pair	r-Wise Kappa Sc	ore	
Overall A	rgumentati	ve Narrative De	escriptive	Expository
0.469	0.477	0.457	0.464	0.475

Table 4: Fleiss' Kappa Agreement on pairwise annotations. A score between 0.41 to 0.60 indicates moderate inter-annotator agreement (Qin et al., 2024).

uation method works, we employ three LLMs as judges, including DeepSeek-V3 (DeepSeek-AI, 2025b), DeepSeek-R1 (DeepSeek-AI, 2025a) and GPT-40 (OpenAI, 2024) to assign scores $1\sim10$ to each sub-question within every evaluation trait. Each model analyzes all sub-questions in a single turn. Specifically, we convert annotated pairwise comparisons into model rankings using a votingbased scoring approach to facilitate more effective comparisons. In all experiments, the temperature is set to 0.2, and the parameter α is fixed to 3.

4.2 Ranking Agreement

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To assess the ranking agreement, we use Spearman's Rank Correlation (Spearman, 1904) and **Kendall's** τ (Kendall, 1938), which capture monotonic relationships between rankings. As shown in Table 2, our fine-grained and genre-oriented evaluation framework shows strong alignment with human judgments (Shen et al., 2023), achieving high correlations in both Spearman's ρ and Kendall's τ . From these results, we draw three key conclusions: (1) Our protocol performs better with stronger LLMs. Our method crafts dimensionspecific sub-questions and uses the CoT strategy to analyze the text and then assign all scores in a single turn. More powerful models exhibit a superior understanding of this complex and fine-grained process. Notably, DeepSeek-R1 achieves an almost

perfect alignment with human annotations, with $\rho = 0.816$ and $\tau = 0.704$. (2) Dependency-based score aggregation improves performance by approximately 2%. Incorporating trait-level weights consistently improves alignment across different judges and essay genres, indicating that when assessing essays, the higher-level dimensions contribute more significantly to accurate evaluation. (3) Our framework achieves higher alignment in Narrative and Descriptive genres. Unlike argumentative and expository essays that emphasize logical structure and coherence and are effectively handled by general text evaluation method, narrative and descriptive writing focus on vivid imagery, rhetorical richness, and lexical complexity, which benefit more from our evaluation approach.

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4.3 Sensitivity Analysis

Accurately determining an LLM's proficiency in specific capabilities is essential for identifying its limitations and guiding improvements (Kim et al., 2025). Therefore, it is crucial that the evaluation protocol reliably reflects both high- and low-quality output. To this end, we conduct a sensitivity analysis to examine how effectively our evaluation protocol distinguishes essays of varying quality.

Accordingly, we categorize the essays into three quality tiers: high-, medium-, and low-quality based on the top-ranked, median-ranked, and bottom-ranked essays from the manually annotated data. Then we apply **Mann-Whitney** U test (Mann and Whitney, 1947) and compute the **Mean Differ**ence (MD) to assess the robustness of the methods, as shown in Table 3. Take the *high&medium* set as an example. The U score indicates the proportion of cases in which high-quality data receive a higher score than medium-quality data. The mean difference reflects the average score difference between

Models	Overall	Argum Open	entative Cons.	Narı Open	ative Cons.	Descr Open	riptive Cons.	Expo Open	sitory Cons.
			Ε	nglish La	inguage l	Models			
Claude-3.7-sonnet (Anthropic, 2025)	76.6	77.7	78.8	75.7	75.3	74.6	73.6	77.5	79.0
Claud-3.5-sonnet (Anthropic, 2024)	75.4	73.4	73.8	<u>75.3</u>	73.6	74.8	73.4	77.1	80.4
Grok-2 (xAI, 2024)	75.3	75.6	78.5	71.5	73.6	70.2	73.5	75.1	79.3
Grok-3 (xAI, 2025)	74.6	74.9	78.1	73.6	72.8	73.1	72.0	73.3	76.4
GPT-40 (OpenAI, 2024)	74.2	74.8	76.9	72.8	72.4	70.5	71.7	75.8	76.7
GPT-4o-mini (OpenAI, 2024)	71.7	72.0	74.1	71.6	68.4	69.9	65.9	72.8	76.7
GPT-3.5-turbo (Brown et al., 2020)	51.5	49.4	51.4	56.5	53.1	51.1	46.8	50.0	52.9
Gemini-2.0-flash (Gemini., 2025)	72.9	74.5	76.3	71.5	71.1	68.4	67.6	76.7	75.4
LLaMa-3.3-70B (Meta, 2024)	61.4	61.2	64.1	62.3	60.3	56.2	53.8	63.2	67.1
LLaMa-3.1-70B (Meta, 2024)	40.5	37.6	46.6	35.1	28.6	45.0	42.2	39.6	44.8
			С	hinese Le	anguage	Models			
Qwen-Max (Qwen, 2025)	75.6	74.5	78.7	73.5	74.7	74.1	72.6	77.1	77.6
Qwen2.5-72B-Instruct (Qwen, 2025)	72.7	73.1	75.2	71.7	71.4	68.8	68.8	74.5	75.5
DeepSeek-V3 (DeepSeek-AI, 2025b)	75.1	77.2	77.9	71.2	71.8	72.7	67.8	80.4	79.4
Doubao-1.5 (Doubao Team, 2025)	73.3	75.1	76.2	72.4	70.8	70.8	69.5	75.4	75.1
ChatGLM-turbo (GLM, 2024)	71.2	70.0	70.8	70.0	69.6	69.2	68.7	74.2	75.8

Table 5: Benchmarking Results on Chinese Essay Writing. In each column, the highest and the second highest performance is highlighted in **bold** and is <u>underlined</u>. **Open** denotes Open-Ended and **Cons.** denotes Constrained.

the high- and medium-quality data.

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The sensitivity analysis in Table 3 shows that our evaluation method is effective at distinguishing essays of varying quality compared to the baseline. Notably, our method shows significantly better performance in the high- and medium-quality essay classification, with an improvement ranging from approximately 2% to 10%. Furthermore, it yields a larger mean difference, suggesting that the score distributions between quality levels are more distinguishable. These trends hold consistently across all judge models, highlighting the robustness and sensitivity of our framework when evaluating outputs from strong LLMs. Overall, R1 emerges as the top-performing model, achieving the highest U score and exhibiting a pronounced distinction across all quality levels.

5 Benchmarking

5.1 Experiment Setup

Baselines. To explore how current state-of-the-430 art LLMs perform in Chinese essay writing, we 431 meticulously select 15 popular large-scale LLMs 432 for evaluation, including English language models 433 and Chinese language models. We access propri-434 etary LLMs via their official APIs and open-source 435 LLMs through their public repositories. During 436 writing, we set the temperature to 0.8 to encourage 437 creativity in generation. 438

Metrics. Considering the inference time cost and overall performance, we adopt GPT-40 as the evaluation judge model. The temperature is set to 0.2 to ensure deterministic output, while all other parameters remain in their default settings. To facilitate fair comparison across models, we normalize the aggregated scores to a 100-point scale.

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Main Results. The benchmark results are presented in Table 5. Notably, state-of-the-art proprietary models achieve strong performance on the Chinese essay writing task, with Claude-3.7-sonnet attaining the highest overall score. Moreover, most newer versions outperform their predecessors, with the exception of Grok, as Grok-3 places greater emphasis on reasoning. It is worth highlighting that Chinese LLM families also perform competitively: Qwen-max ranks as the second-best model, DeepSeek surpasses Grok-3 and GPT-40 on this task, and Qwen-2.5-72B-Instruct outperforms both the GPT-40-mini and its similarly sized counterpart, LLaMA-3.1-70B-Instruct.

Genre-based Performance. LLMs demonstrate stronger capabilities in writing argumentative and expository essays, while they fall short in narrative and descriptive genres. This disparity likely stems from the inherent characteristics of these genres: argumentative and expository essays emphasize structural coherence, logical reasoning, and clear topic development, where LLMs typically excel. In contrast, narrative and descriptive



Figure 4: Comparison of Performance by Sets.

essays require creativity, emotional nuance, and 469 context-aware storytelling. These challenges are 470 471 further amplified in Chinese writing, where expressive richness, metaphorical language, and cultural 472 context play a more significant role, especially in 473 narrative and descriptive forms. Such features are 474 difficult to model with LLMs, leading to degraded 475 performance in these genres. 476

Open-Ended versus Constrained. 477 Interestingly, LLMs perform better in constrained sets than open-478 ended sets, as shown in Figure 4. This is likely 479 because constrained prompts provide more explicit 480 requirements and clearer guidance, which help the 481 models organize content, maintain relevance, and 482 follow a well-defined structure. In contrast, open-483 ended prompts offer greater flexibility but less di-484 rection, placing higher demands on the model's 485 ability to plan, generate diverse content, and main-486 487 tain coherence without external constraints.

6 Related Work

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LLM Generation Evaluation. The rapid progress of LLMs prompts the need for a comprehensive evaluation of their text generation (Liu et al., 2023; Kim et al., 2025). Existing frameworks are often task-specific: instruction-following is assessed via diverse prompts and constraint scenarios (Qin et al., 2024; Wen et al., 2024; Jiang et al., 2024), while reasoning is tested through multi-hop question answering (Krishna et al., 2024; Ling et al., 2025). In this work, we turn our attention to the issue of generated text quality evaluation. Previous research has addressed quality assessment in specific contexts: e.g., summarization (Liu et al., 2024c), financial content (Islam et al., 2023; Xie et al., 2024), Wikipedia-style writing (Gao et al., 2024; Zhang et al., 2025), and long-form text (Tan et al., 2024; Que et al., 2024). In contrast, we address the underexplored challenge of evaluating Chinese writing across literary genres, offering a systematic framework for multilingual LLM assessment. 506

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Automatic Essay Evaluation. Automated Essay Scoring (AES) uses computer systems to assess written text in educational settings (Dikli, 2006; Attali and Burstein, 2006). While datasets like ASAP (Hamner et al., 2012) and TOEFL11 (Blanchard et al., 2013) provide valuable English essay prompts, they are limited in scale and unsuitable for assessing LLM-generated essays, especially in non-English contexts. AES methods have progressed from hand-crafted features (Yannakoudakis et al., 2011; Persing and Ng, 2013) to neural, traitspecific models (Taghipour and Ng, 2016; Uto et al., 2020), and recently to LLM-based evaluation (Lee et al., 2024; Chu et al., 2025). These typically score coarse-grained aspects like grammar, coherence, content, and creativity (Li and Ng, 2024), but remain English-centric and overlook the rhetorical and cultural complexities of Chinese writing. In addition, although recent frameworks like WritingBench (Wu et al., 2025) and BigGen Bench (Kim et al., 2025) offer fine-grained evaluation strategies through prompt-specific assessment instances, they fall short in covering a broader range of writing prompts, limiting their applicability to various essay tasks.

7 Conclusion

In this work, we present ESSAYBENCH, the first comprehensive benchmark for evaluating the capabilities of LLMs in the Chinese essay writing and evaluation across four distinct literary genres. To address the challenges of analytic and accurate essay evaluation, ESSAYBENCH adopts a genre-oriented, hierarchical multi-trait evaluation approach that enables fine-grained scoring. Specifically, we introduce a dependency-based aggregation strategy to compute the final scores. Our comprehensive human agreement study and sensitivity analysis demonstrate that the framework achieves high alignment with human judgment and effectively distinguishes essays of varying quality. Furthermore, we benchmark 15 large-size LLMs on Chinese essay writing, revealing notable limitations in descriptive and narrative essays, particularly for open-ended prompts. Overall, ESSAYBENCH offers a diverse dataset and a robust evaluation framework for Chinese essay, with practical implications for educational applications and future research.

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Despite the contributions presented in our work,

Limitations

several minor limitations remain:

• First, the datasets and evaluation dimensions used in this study are primarily based on Chinese essay prompts. While the widely adopted essay categorization framework can be applied to other languages such as English and Japanese, the current work focuses on Chinese essay writing. This is due to the significant differences in idioms, linguistic conventions, and cultural expressions across languages. Nonetheless, the framework has the potential to be translated and extended to multilingual settings in future work.

- Second, although this work proposes a more fine-grained evaluation method for Chinese essays, the designed evaluation traits primarily focus on overall expression and structural aspects, such as paragraph organization and comprehensive performance of the essays from multiple perspectives. However, it overlooks more granular analyses at the lexical and sentence levels. Future research could incorporate finer-grained evaluations that consider sentence-level coherence and word-level richness
- Third, ESSAYBENCH primarily focuses on evaluating the overall quality of essays, while overlooking instruction-following abilities. For example, whether the generated essays adhere strictly to the prompt requirements has not been thoroughly assessed. To enable a more comprehensive evaluation, future research could address this gap by incorporating the essay prompt following ability as an explicit evaluation dimension.

Ethics Statement

To mitigate potential ethical concerns, all essay prompts were carefully reviewed and filtered by manual inspection. We ensured that none of the prompts contained offensive, gender-biased, harmful, or otherwise ethically inappropriate content. In addition, all participants involved in the human agreement study were professional annotators who were fairly compensated for their contributions.

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A Hierarchical Traits Design

We developed a comprehensive, genre-specific multi-trait evaluation framework tailored explicitly to the distinctive features, objectives, and contexts of each essay genre. This system aligns closely with educational standards and requirements, ensuring a precise and relevant assessment approach.

A.1 Argumentative Essays

For Argumentative essays, we focus on:

- Argument (d = 0): Clarity, precision, and relevance of the central viewpoint.
- Evidence (d = 1): Strength, appropriateness, and reliability of supporting details and examples.
- Argumentation Methods (d = 2): Effective use of logical strategies such as comparison, causality, and deduction.
- Logical Development (*d* = 2): Coherent and logically sequenced progression of ideas.
- Expression (d = 3): Clarity, precision, and stylistic appropriateness of language.
- Endings (d = 3): Ability to summarize arguments effectively and deliver a compelling conclusion.

A.2 Narrative Essays

For Narrative essays, we emphasize:

- Language and Style (d = 0): Effectiveness of vocabulary, tone, and stylistic choices in story-telling.
- Structural Layer and Narrative Techniques (d = 0): Sophisticated use of narrative structures and literary techniques.
- Theme and Emotional Expression (d = 1): Depth of thematic content and authenticity of emotional portrayal.
- Overall Structure and Plot Development (d = 2): Clear progression, effective pacing, and cohesive plot structure.
- Characterization and Detail (d = 2): Rich, vivid portrayal of characters and setting details.
- Choice of Material (d = 3): Originality, relevance, and effectiveness in selecting narrative content.

A.3 Descriptive Essays

For Descriptive essays, we highlight:

• Clarity of Subject and Central Theme (d = 0): Distinct and clearly communicated central image or idea.

• Rhythm and Overall Fluency (d = 1): Smooth flow and harmonious pacing throughout the essay.

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- Content and Unique Perspective (d = 1): Original insights and distinctive angles in the descriptions.
- Structure and Organization (d = 2): Effective and logical arrangement enhancing readability.
- Emotional Expression and Atmosphere Description (d = 2): Authentic depiction of the atmosphere and emotional tone.
- Sensory Details (d = 3): Use of vivid and engaging sensory imagery.

A.4 Expository Essays

Finally, for Expository essays, we prioritize:

- Clarity of Topic and Purpose (d = 0): Clearly defined subject matter and objectives.
- **Practicality and Relevance** (d = 0): Realworld applicability and pertinence of the provided information.
- Scientific Accuracy and Credibility of Content (d = 0): Validity and trustworthiness of the facts and data presented.
- Logical Structure and Coherence (d = 1): Systematic and logically sound organization of ideas.
- Clarity and Appropriateness of Language (d = 2): Use of a clear, accessible, and appropriate academic language.
- Diversity and Appropriateness of Explanatory Methods (d = 3): Variety and suitability of explanatory techniques, enhancing comprehension and reader engagement.

B Evaluation Prompt

B.1 CoT Prompting

In our evaluation method, we implement the Chain-1039 of-Thought (CoT) prompting strategy, which first 1040 guides the large language models (LLMs) to sys-1041 tematically analyze essays before assigning scores. 1042 This structured analytical step provides LLMs with 1043 robust reasoning and clear justifications, facilitat-1044 ing accurate scoring decisions. In addition, the 1045 detailed CoT reasoning process serves as a valu-1046 able reference, allowing evaluators and users to 1047 better understand and verify the rationale behind 1048 each assigned score. The specific prompts used for 1049 the CoT strategy are illustrated in Figure 5.

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B.2 Trait-based sub-questions

For each hierarchically designed trait, we carefully develop a series of detailed, targeted evaluation questions, addressing multiple dimensions and perspectives relevant to each trait. These questions are crafted to comprehensively assess the specific characteristics and nuances inherent in each genre of essays. The specific questions tailored for Argumentative, Narrative, Descriptive, and Expository essays are illustrated in Figures 6, 7, 8, and 9, respectively.

C Human Annotation

For our human agreement study, we recruited 14 professional annotators with strong backgrounds in Chinese linguistics and language education. Each annotator was assigned approximately 70 data samples per day, working within an 8-hour schedule. The complete annotation of 5,040 data items was completed over five days. This rigorous process ensured consistency, reliability, and high-quality annotations across the dataset. The comprehensive annotation guidelines provided to annotators are illustrated in Figure 10.

D Case Study

In this section, we conduct a qualitative case study 1075 of essays across different quality levels, using out-1076 puts from various LLMs. Specifically, we examine high-quality essays generated by DeepSeek 1078 Chat (score: 8.7), median-quality essays by GPT-1079 3.5-turbo (score: 7.0), and low-quality essays by 1080 Llama-3.1-70B-Instruct (score: 6.3), as shown in 1081 Figures 11, 12, and 13. These scores are derived 1082 from the evaluations conducted by DeepSeek-R1. 1083 We observe that the evaluator provides detailed and 1084 consistent analyses across essays of varying quality, 1085 highlighting both strengths and weaknesses. This 1086 type of evaluative feedback demonstrates strong 1087 interpretability and reliability, making it valuable 1088 for future educational applications such as formative writing assessment and personalized feedback 1090 generation. 1091

Chain-of-though Evaluation Prompt (Chinese) 你是一个擅长评价文本质量的专家、负责客观公正地评估AI助手对用户关于议论作文时的回答 质量。请根据以下评价标准,对助手的回答进行评估。 每个问题请根据以下评分标准给出分数: -1~2分:非常差(完全没有达到预期标准) - 3~4分: 较差(部分满足预期标准,但存在明显问题) - 5~6分: 中等 (满足基本标准但仍有改进空间) - 7~8分: 较好 (大部分满足标准, 仅有少量小问题) - 9~10分: 优秀 (完全符合或超过预期标准) 评估原则: - 回答必须需要遵循用户的指令, 尤其是作文回答的读者人群和适用场景要与指令相符合; - 采用"证据-推论"模式,每个评分必须有文本依据; - 你的打分需要尽可能严格,必须有理有据; - 每个问题都需要提供评分,并附上简短的解 释说明; - 输出每个问题的说明和评分,每个维度的最终评分是该维度下所有问题分数的平均值,计 算得到每个维度的分数值 # 以下是作文题目: </题目开始> {Essay Prompt} </题目结束> # 以下是作文题目: </题目开始> {Essay Prompt} </题目结束> # 以下是评分标准: {议论文问题} Chain-of-though Evaluation Prompt (English Translation Version) You are an expert skilled in evaluating text quality, responsible for objectively and impartially assessing the quality of an AI assistant's responses to users regarding argumentative essavs Please evaluate the assistant's responses based on the following criteria. For each question, provide a score according to the following grading scale: - 1~2 points: Very poor (completely fails to meet expected standards) - 3~4 points: Poor (partially meets expected standards but has significant issues) - 5~6 points: Average (meets basic standards but still has room for improvement) - 7~8 points: Good (mostly meets standards with only minor issues) - 9~10 points: Excellent (fully meets or exceeds expected standards) Evaluation principles: - Responses must adhere to the user's instructions, especially ensuring the target audience and applicable scenarios for the essay response align with the instructions. - Adopt an "evidence-inference" model—each score must be supported by textual evidence. - Your scoring must be as strict as possible and well-justified. - Each question requires a score accompanied by a brief explanation. - Provide an explanation and score for each question. The final score for each dimension is the average of all question scores under that dimension. Calculate the score for each dimension accordingly. # The following is the essay prompt: </Prompt Start> {Essay Prompt} </Prompt End> # The following is the argumentative essay: </Essay Start> {Essay} </Essay End> The following is the evaluation rubrics: {Sub-questions of Argumentative Essays}

Figure 5: CoT Prompt Strategy for Evaluation.

Argument	中心论点
 Is the central thesis clearly articulated? Is the thesis easy to extract and summarize? Does the essay state its thesis explicitly at the very beginning? Does the argument engage with deeper social, cultural, or philosophical issues? Does the thesis demonstrate original insight and depth of understanding? 	 1.文章中心观点是否清晰文章 2.中心观点是否易于提炼和概括? 3.文章是否在开篇直接明确地提出了论点? 4.文章观点是否深入探讨了深层次的社会、文化或哲学思考? 5.文章观点是否体现出思想见解和对问题的洞察
Evidence	论据
 Are the pieces of evidence closely tied to the thesis? Is the amount of evidence sufficient? Is the evidence presented in enough detail? Is the evidence representative of the points being made? Are cited data, sources, and examples credible and reliable? 	 1.论据与论点的关联是否紧密? 2.所使用的论据是否足够 3.所使用的论据是否详实? 4.所使用的论据是否具有代表性? 5.引用的数据、文献、实例是否真实可靠?
Argumentation Methods	论证方法
 Does the essay employ a variety of reasoning techniques (e.g. exemplification, comparison, citation, cause–effect, induction/deduction) effectively? When using statistics or others' opinions, are they accompanied by clear explanation and analysis? Are opposing viewpoints analyzed and critiqued objectively? Does the essay consider multiple perspectives to strengthen its persuasiveness? 	 1.是否灵活运用了举例论证、对比论证、引用论证、因果论证、归纳演绎等 多种论证手法 2. 如果运用了统计数据或者他人观点,是否配合解释和分析 3.对于对立观点是否客观分析和批判? 4.在文章能否兼顾不同观点,从而增加说服力?
Logical Development	论证过程
 Are the sub-arguments in each paragraph coherent with the central thesis? Do the sub-arguments form a clear, progressive logical chain? Does each paragraph's sub-argument have appropriate supporting evidence? Are there smooth transitions and logical connections between paragraphs? 	 1.文章的小论点是否与中心论点保持连贯? 2.小论点之间是否构成合理的层层递进的逻辑链条? 3.每个段落小论点是否有对应的论据支撑? 4.段落之间有无合适的过渡与承接?
Expression	
 Is the word choice appropriate and precise? Is the language logically coherent? Are sentence structures and tones varied and engaging? 	1.文章用词是否贴切、精确? 2. 文章语言是否具有逻辑性? 3. 文章句式、语气是否丰富多样?
Endings	
 Does the conclusion echo the issues or claims raised in the introduction to form a cohesive whole? Does it summarize the essay's main theme rather than merely restating 	 结尾是否呼应文章开头提出的问题或论断,使文章形成整体? 结尾是否总结了文章主题,而非做了简单的重复论点阐述? 结尾是否对文中多个角度的论证内容加以概括提炼?

Figure 6: Multi-traits and sub-questions of Argumentative Essay.

	Theme & Emotional Expression		主题立意与情感表达	
2.Does the narration attitude (e.g., love, 3.Is the theme thou 4.Are the emotions contrivance?	present a clear central idea or core theme? ve effectively convey the author's intended , longing, nostalgia, awe)? ught-provoking or inspiring reflection? s expressed naturally, avoiding excessive s resonate emotionally, allowing readers to fe ?	emotion or 1.文章是否有範 2.文章是否在第 思念、怀旧或積 3.立意是否具存 4.文章情感是召	5明的中心思想,核心立意? (事中有效地传达出作者想要表达的情感或; 故畏等? 5启发性,或给人带来思考或感悟? 5自然流露,避免过渡煽情或矫揉造作? 5者的情感共鸣,让读者感受到文章的温度:	
	Overall Structure & Plot Development	~	整体结构与情节安排	
2.Does the introdu effectively wrap up 3.Are there key plo	nfold organically with a clear beginning, mi iction capture readers' attention, and does to and echo the theme? ot twists or climaxes that enhance readabili vivid detail and emotional pacing lend unity	the conclusion 1.文章是否有走 2.文章开头能召 ty? 3.叙事中是否说	已承转合,能够自然而有序地展开故事? 5抓住读者,结尾能否有效收束并呼应主题 5型了关键的情节转折或高潮,增强文章可 8节描写和情感推动,让事件本身更具有内?	读性?
	Characterization & Detail	,	人物形象与细节描写	
inner thoughts, and 2.Do characters' w 3.Are settings, eve 4.Does the enviror highlight the theme 5.Are distinctive de	vords and behaviors align logically with thei ents, and moods described with appropriate nment reinforce characters' emotions, adva	r personalities? r ichness? nce the plot, or tional impact? * ***********************************	a、语言、动作、心理活动、神态等多种方: 杜格特征是否一致、有逻辑? 这生的事件、地点、氛围做了恰到好处的描: 否烘托人物情绪、推动情节发展或突出文章 建型意义的细节,让文章更具有真实感和感: 否恰当,没有偏离主线或喧宾夺主?	写? 注题?
	Language & Style			
	Language & Style	γ	语言表达	
appropriately to er 2.Is the language b 3.Do sentences ar unnecessary pado	ces (simile, personification, parallelism, et nhance readability? ooth accessible and elegant, reflecting lite nd paragraphs flow smoothly, avoiding abr	rary flair? upt jumps or 3 是否能论行	当的修辞手法(比喻、拟人、排比等)增加	之间、段落之间是
appropriately to en 2.1s the language b 3.Do sentences ar unnecessary pado 4.Are transitional o	ces (simile, personification, parallelism, et nhance readability? both accessible and elegant, reflecting lite nd paragraphs flow smoothly, avoiding abr ding? or linking words used to maintain clarity ar Choice of Material	rary flair? upt jumps or nd coherence? 1. 是否通过恰 2. 语言是否通 否衔接自然流 3. 是否能够运	当的修辞手法(比喻、拟人、排比等)增加 谷易懂而又不失文采,体现文学性 句子 汤,避免生硬的跳跃或内容堆砌?	之间、段落之间是
appropriately to er 2.Is the language to 3.Do sentences ar unnecessary pado 4.Are transitional of 4.Are transitional of 4.Are the selected 2.Can a single sm themes? 3.Is the angle or m 5.Can familiar sub twist? 6.Is the material tig irrelevant details?	ces (simile, personification, parallelism, et nhance readability? ooth accessible and elegant, reflecting lite nd paragraphs flow smoothly, avoiding abr ding? or linking words used to maintain clarity ar	rary flair? upt jumps or ind coherence? emotional s? ve or with a new resting but tage for the set of the set	当的修辞手法(比喻、拟人、排比等)增加 谷易懂而又不失文采,体现文学性 句子之 汤,避免生硬的跳跃或内容堆砌? 用过渡词或关联词,让行文舒展、章法清晰 选材的典型性与创新性 杨景是否具有代表性、典型性; 小事折射出深层次的人生、社会或情感问题 每度是否独具匠心,避免千篇一律?	之间、段落之间是 ? 题? 选材与主题能否紧
appropriately to er 2.1s the language t 3.Do sentences ar unnecessary pado 4.Are transitional of 1.Are the selected 2.Can a single sm themes? 3.1s the angle or m 5.Can familiar sub twist? 6.Is the material tig irrelevant details? 7.Is real, meaning emotion?	ces (simile, personification, parallelism, et nhance readability? both accessible and elegant, reflecting lite nd paragraphs flow smoothly, avoiding abr ding? or linking words used to maintain clarity ar Choice of Material events or scenes typical and representativ all incident illuminate deeper life, social, or naterial fresh and inventive, avoiding clichés jects be presented from a unique perspecti ghtly connected to the theme, avoiding inte	rary flair? upt jumps or ind coherence? emotional s? ve or with a new resting but tage for the set of the set	当的修辞手法(比喻、拟人、排比等)增加 容易懂而又不失文采,体现文学性 句子之 汤,避免生硬的跳跃或内容堆砌? 用过渡词或关联词,让行文舒展、章法清晰 选材的典型性与创新性 杨景是否具有代表性、典型性; 小事折射出深层次的人生、社会或情感问题 的度是否独具匠心、避免千篇一律? S有独特的视角或写法,呈现新的亮点? 些材有意思但与主题脱节?	之间、段落之间是 ? 题? 选材与主题能否紧

Figure 7: Multi-traits and sub-questions of Narrative Essay.

Clarity of Subject and Central Theme	描写对象的鲜明性与中心主题
 Is the central theme or key image prominently highlighted? Is the essay's main purpose or emotional tone clearly conveyed? 	1.中心主题或中心意象是否突出? 2.文章写作的主旨或情感基调是否清晰?
Sensory Detail	
 Does the writing employ multiple senses—visual, auditory, tactile, gustatory, etc.—to portray the subject's details? Does it create an immersive, "you-are-there" experience rather than remaining at a superficial or generic level? Are word choices precise and evocative, capturing the subject's characteristics with vivid language? 	 1. 是否通过视觉、听觉、触觉、味觉等多种感官来呈现对象的细节? 2. 是否做到让人如临其境,而非只停留在表面、笼统的描述? 3. 用词是否准确精炼,能将对象的特征用传神的词汇表达出来?
Structure and Organization	结构布局与层次
 1.Is the overall structure logical, using spatial or chronological order to guide the reader's experience? 2.Is there an appropriate balance between elaboration and brevity, with major elements described in depth and minor ones summarized? 3.Are transitions between paragraphs smooth and natural? 4.Do the focal descriptions stay tightly aligned with the theme and the author's intended emotion? 	 1. 文章结构是否合理,能否通过空间顺序或者时间顺序的组织方式让读者 顺着作者的笔触去观赏或体会对象? 2. 是否详略得当,主要景物或特征详写,次要部分略写,并在详略之间保 持合适的比例? 3.文章段落间的衔接、过渡是否流畅自然? 描述重点是否紧扣主题,并与 作者的情感意图相呼应?
Emotional Expression and Atmosphere	
1. Does the essay seamlessly integrate the author's emotions (e.g., affection,	
 longing, nostalgia, wonder) into the descriptive details? 2. Does it evoke a distinct mood or ambiance—such as tranquility, liveliness, mystery, or solemnity? 3. Do the environmental descriptions resonate with the author's feelings, offering readers a unified internal-external aesthetic experience? 	 文章是否将作者的情感(喜爱,向往,怀念,惊叹等)自然地融于细节 之中? 文章是否营造特定的氛围和意境,比如静谧、热闹、神秘、庄严等? 环境描写是否与作者情感相匹配,能够让读者感受到内外合一的审美体验?
 longing, nostalgia, wonder) into the descriptive details? 2. Does it evoke a distinct mood or ambiance—such as tranquility, liveliness, mystery, or solemnity? 3. Do the environmental descriptions resonate with the author's feelings, 	之中? 2. 文章是否营造特定的氛围和意境,比如静谧、热闹、神秘、庄严等? 3. 环境描写是否与作者情感相匹配,能够让读者感受到内外合一的审美体
 longing, nostalgia, wonder) into the descriptive details? 2. Does it evoke a distinct mood or ambiance—such as tranquility, liveliness, mystery, or solemnity? 3. Do the environmental descriptions resonate with the author's feelings, offering readers a unified internal-external aesthetic experience? 	之中? 2. 文章是否营造特定的氛围和意境,比如静谧、热闹、神秘、庄严等? 3. 环境描写是否与作者情感相匹配,能够让读者感受到内外合一的审美体 验?
Longing, nostalgia, wonder) into the descriptive details? 2. Does it evoke a distinct mood or ambiance—such as tranquility, liveliness, mystery, or solemnity? 3. Do the environmental descriptions resonate with the author's feelings, offering readers a unified internal-external aesthetic experience? Content and Unique Perspective 1. Does the writer uncover new insights in familiar subjects, using a fresh angle or dimension of thought? 2. Does it avoid clichéd phrasing or formulaic techniques? 3. Does it draw on personal experience or reflection to add warmth and emotional impact? 4. Does the chosen subject carry real-world relevance or cultural resonance	之中? 2. 文章是否营造特定的氛围和意境,比如静谧、热闹、神秘、庄严等? 3. 环境描写是否与作者情感相匹配,能够让读者感受到内外合一的审美体验? 选材典型性与独特视角 1. 所选事件或场景是否具有代表性、典型性; 2.能否通过一件小事折射出深层次的人生、社会或情感问题? 3.写作材料或角度是否独具匠心,避免千篇一律? 4. 常见题材能否有独特的视角或写法,呈现新的亮点? 选材与主题能否紧密结合,避免选材有意思但与主题脱节?

Figure	8:	Multi-traits	and	sub-questions	of	Descriptive Essay.

	Clarity of Topic and Purpose			主题与目的明确性	
2. Does the essay	he expository essay clearly identifiable and explicitly introduce the subject or principl ginning or clearly throughout, helping reade	le it seeks to		否鲜明且容易辨识; 者整体行文中清晰指出了要说明的对象或原	理,让读者明了文
	Scientific Accuracy and Credibility of Content			内容的科学性和准确性	
Does the essay syste information and prima If the essay uses clas without omitting critic Are professional or a understandable by re	ssification or step-by-step explanations, does it in cal information? abstract concepts sufficiently explained or simplifie	al background clude all core points ed to be easily	 2. 是否对说明对结果是分类型说明结 3. 对于专业或抽结解? 	事实、理论是否准确,是否能保证来源的可 象做到了系统化的介绍,包括必要的背景和 或分步骤说明,是否涵盖了核心要点,避免 象的概念,是否有足够的解释或通俗化的阐 术严谨的同时,避免过渡晦涩难懂?	主要的方面? 如 -楼关键信息?
	Logical Structure and Coherence			逻辑结构与条理性	
the content? 2. Are transitions bet 3. Does the essay hig addressing secondar 4. Are explanations p specific, facilitating d 5. understanding as r	oresented progressively from simple to complex, o leeper readers acquire foundational information? ssess or procedures, are they presented in a logic	al? g or briefly or from general to	 是否选择了最合适 3. 是否能突出主要 4. 说明重点是否可 更深入的只是? 	告构方式包括时间顺序、空间顺序、逻辑顺 适的结构? 2. 段落与段落之间、章节与章节 要内容,并对次要部分进行适度简化或补充 由浅入深、由表及里,帮助读者在逐步掌握: 逞或步骤,是否按照可操作性或便于记忆的,	之间过渡是否顺畅? 说明? 基础信息后在理解
	Clarity and Appropriateness of Language			语言表达的清晰度与规范性	
is the language co decorative phrasir 2. Are sentence si complex or length	tructures clear and easily understood, avoi	ents or overly iding overly	华丽辞藻? 2.句式是否易于 3.用词是否准确	至于信息的高效传递,语言是否尽量简洁, 理解,避免复杂或者冗长的句子? ,是否避免模棱两可的表述以及口语化、	
colloquial languag	erms or concepts sufficiently explained, ens	suring clarity and	专业术语或概念	解释是否到位,读者阅读时不会产生歧义	
colloquial languag 4. Are technical te	erms or concepts sufficiently explained, ens	suring clarity and	专业术语或概念		
colloquial languag 4. Are technical te preventing reader 1.Does the essay ap classification, examp 2.Do different explan 3.Does the essay tra forms through concer 4.Does the essay aver readers? 5.Does the essay ap	rms or concepts sufficiently explained, ens confusion?	., definition, ly? into understandable confuse or distract ert opinions, clearly	 1.是否恰当地使 种说明方法? 不 2.是否通过具体 3.是否避免使用 	解释是否到位,读者阅读时不会产生歧义	? 明、比较说明等多 技术形象化? 困惑?
colloquial languag 4. Are technical te preventing reader 1.Does the essay ap classification, examp 2.Do different explan 3.Does the essay tra forms through concer 4.Does the essay aver readers? 5.Does the essay ap	Practicality and Relevance Propriately use various explanatory methods (e.g., les, numerical illustration, comparison)? latory methods complement one another effectivel insform abstract concepts or complex techniques is te examples or relatable analogies? oid using irrelevant or forced examples that might propriately cite authoritative sources, data, or exp	., definition, ly? into understandable confuse or distract ert opinions, clearly	1. 是否恰当地使) 种说明方法?不 2. 是否通过具体 3. 是否通过具体 4. 是否引用权威就	解释是否到位,读者阅读时不会产生歧义 说明方法的多样性与合理性 用定义说明、分类说明、举例说明、数字说 同说明方法能否相互补充? 的事例、生活化的比喻,把抽象概念或复杂 与主题无关或牵强的例子,反而使读者感到	? 明、比较说明等多 技术形象化? 困惑?

Figure 9: Multi-traits and sub-questions of Expository Essay.

Annotation Guideline (Chinese)

```
数据标注指导: 文章质量评估
一、数据说明
包含以下字段的数据文件:
1. query:任务要求描述
2. writing_1: 第一篇待比较文章
3. writing_2: 第二篇待比较文章
4. score: 请在此填写比较结果 (1/2/tie)
 二、评估任务
基于query的具体要求,系统比较writing_1和writing_2的文本质量,并:
1. 给出评分(1表示writing_1更好, 2表示writing_2更好, tie表示质量相当)
2. 简要说明评分理由
三、质量评估标准
(一) 基础要求
1. 符合性要求:
•遵循query中规定的内容要求、文体规范和目标读者/场景
•字数要求大概估计
2. 文体分类, 按照文体特点进行评价:
议论文 (argumentative)记叙文 (narrative)
• 描写文/散文 (descriptive)
•说明文 (expository)
注意事项 1. 评分必须基于query的具体要求 2. 理由说明需简明扼要, 突出关键差
```

```
异点 3. 忽略格式
```

Annotation Guideline (English Translation Version)

 I. Data Description The data file contains the following fields: query: Description of task requirements writing_1: First article to be compared writing_2: Second article to be compared score: Comparison result (1/2/tie) II. Evaluation Task Based on the specific requirements in the query, systematically compare the text quality of writing_1 and writing_2, and: Provide a rating (1 = writing_1 is better, 2 = writing_2 is better, tie = equal quality) Briefly explain the rationale for the rating III. Quality Evaluation Criteria (1) Basic Requirements: Follow the content requirements, writing style norms, and target audience/scenario specified in the query Approximate word count estimation Genre Classification (Evaluate based on stylistic characteristics): Argumentative (persuasive essays) Narrative (storytelling) Descriptive (vivid depictions/prose) Expository (informative/explanatory writing) Key Notes: Ratings must be based on the specific requirements in the query Evaluation based on the specific requirements in the query
Ignore formatting issues (focus on content quality only)

Figure 10: Annotation Guideline for Human Agreement Study.

Essav from Llama-3.1-70B-Instruct

Prompt:以人生为主题写一篇800-1200字的议论文,探讨人生的意义、挑战和美好之处,适合高中生阅读,要求使用优美的语 言和有力的论据,结构清晰,分为引言、主体和结论三部分。

Writing:人生是一场充满挑战与机遇的旅程,我们每个人都在努力寻找着人生的意义。人生的意义是什么?是财富和权力? 是爱情和友谊?抑或是梦想和成就?每个人对人生的意义有着不同的理解和追求。然而,无论我们如何定义人生的意义,挑战和美好之处始终是人生旅程中不可或缺的两大元素。\n\n人生的挑战无处不在,从我们出生开始,就面临着来自各方面的 考验。生活的艰辛、学习的压力、情感的波动,种种困难都可能让我们感到沮丧和无助。然而,正是这些挑战,让我们变得 更加坚强和成熟。我们可以从失败中吸取教训,变得更加谦卑和努力。我们可以从挫折中找到动力,变得更加勇敢和坚韧。 人生的挑战是我们成长的阶梯,是我们实现梦想的动力。\n\n人生的美好之处同样令人着迷。生活中的每一个瞬间,都可能 是美好的。一个阳光明媚的早晨,一场春雨绵绵的夜晚,一次难忘的旅行,一段真挚的友谊,都是人生美好之处的体现。人生的美好之处不仅仅在于大事,更在于细节。我们可以从一杯热咖啡的芬芳中感受到生活的温暖,从一本好书的知识中感受 到求知的快乐,从一场美丽的日落中感受到大自然的壮丽。人生的美好之处是我们生活的动力,是我们前行的方向。\n\n人 生的意义是什么?答案在于每个人内心的追求。无论我们如何定义人生的意义,挑战和美好之处始终是人生旅程中不可或缺 的两大元素。我们可以从挑战中变得更加坚强和成熟,可以从美好之处中找到生活的动力和方向。人生是一场旅程,我们每 个人都是自己的主角。让我们勇敢地面对挑战,珍惜每一个美好的瞬间,找到属于自己的人生意义。

Formatted Evaluation Example from DeepSeek-R1 Total Score: 6.3

- 文章中心观点较为明确,提出人生意义与挑战、美好相关,但未明确界定三者关系(<mark>如挑战如何定义意义</mark>),存在模糊性
- 中心论点可提炼为"人生意义在于挑战与美好共存",但需从文本中二次推导,未直接呈现核心判断句
 引言段通过设问引出论点,但最终论断使用"不可或缺的两大元素"的并列式表达,未形成明确的价值判断
- 2. 仅停留在现象描述层面、缺乏对存在主义、斯多葛学派等哲学视角的引入、对"意义构建机制"的探讨深度不足
 5. 对"压力转化为动力"等常见观点复述较多、缺少如"苦难悖论""异化劳动"等新颖视角的洞察
- 公 对 压刀软化为匈刀 等制现效点发达教梦, 或少如 古相仔论 开化为匈 等制规论用的洞察
 论据与"挑战促进成长""美好激励前行"的关联成立,但"春雨夜晚"等例子与论点逻辑连接较弱
 7. 仅使用6个泛化例证(学习压力、旅行等),缺乏具体人物/历史事件等实证支撑
 8. 失败中吸取教训"等论据未说明具体过程,如未对比失败前后的转变机制

- 全部采用日常生活案例,缺少跨文化(如武士道精神)或经典文本(如《活着》)等代表性例证
- 10. 未出现数据或文献引用, 真实性无法验证但无硬伤
- 11. 论据来源限于个人体验,缺少学术研究、历史案例、文学典故等多元维度
- 12. 使用举例论证(咖啡、日落)和因果论证(挑战→坚强),但缺乏对比论证(如顺境vs逆境人生)和引用论证
- 13. 春雨例证过渡突兀, 未能自然衔接"美好产生动力"的论证链条 14. 统计数据完全缺失, 他人观点仅隐含在"每个人"等泛指表达中
- 未提及"享乐主义"等对立观点、缺乏辩证性思考
 单维度论证美好与挑战的正面性,未讨论过度挑战可能带来的负面影响
- 17. 举例与因果论证各自独立, 未形成"挑战案例→成长机制→意义构建"的协同论证
- 18. 主体部分"挑战"与"美好"两个小论点均服务总论点,但第三段"意义在于内心追求"产生主题偏移
- 19. 从"挑战"到"美好"采用并列结构,未构建"挑战孕育美好"或"美好化解挑战"的递进关系

- 25. 陈述句占比90%以上,缺少反问(难道不是...)等句式变化
- 26. 未使用专业术语,符合高中生认知水平
- 27. 排比修辞增强气势,但"主角"等比喻未能深化论证深度 28. 结尾复述"挑战与美好不可或缺",与引言设问形成闭环
- 29. 未升华至"意义在于创造价值"等新认知,停留在论点归纳层面

Figure 11: Low-quality Essay and Evaluation Example.

Essay from GPT-3.5-turbo

Prompt:以人生为主题写一篇议论文,探讨人生的意义、挑战和美好之处,适合高中生阅读,要求使用优美的语言和有力的论 据,结构清晰,分为引言、主体和结论三部分。

Writing:人生,是一场漫长的旅程,充满着无数的意义、挑战和美好之处。在这个世界上,每个人都在不断地探寻着自己存 在的意义,面对着各种考验和挑战,同时也感受着生活中那些美好的瞬间。\n\n引言\n\n人生,是一场奇妙的冒险,每一个 人都在这个旅程中寻找着自己的方向。我们来到这个世界上,不仅仅是为了生存,更是为了追寻那份内心深处的意义。在这 个过程中,我们会遇到各种各样的挑战,但也会经历许多美好的时刻。人生的意义,就在于我们如何应对挑战,感受生活的 美好。\n\n主体\n\n人生的意义,在于我们对世界的贡献和影响。每个人都有自己独特的才华和潜力,可以为这个世界带来 改变和进步。无论是成为一名医生拯救生命,还是成为一名艺术家创造美丽的作品,每个人都可以在自己的领域里发挥作用, 为社会做出贡献。人生的意义,就在于我们能否找到自己的使命,努力实现自己的梦想。\n\n人生中的挑战,是我们成长和 进步的机会。在面对困难和挫折时,我们会变得更加坚强和勇敢。挑战可以激发我们内心的潜能,让我们超越自己,变得更 加优秀和成熟。正是因为挑战的存在,我们才能不断地突破自己的局限,实现自己的价值。人生的挑战,让我们变得更加坚 强和有力量。\n\n人生中的美好,隐藏在生活的点滴中。每一个微笑、每一次成功、每一次相遇,都是生活赋予我们的礼物。 美好不一定是璀璨的光芒,而可能是平凡中的温暖和感动。当我们用心感受生活的每一个瞬间,我们就会发现生活中有无数 的美好和奇迹。人生的美好,就在于我们懂得珍惜眼前的幸福和快乐。\n\n结论\n\n人生,是一场充满意义、挑战和美好的 旅程。在这个旅程中,我们会不断地成长和进步,感受到生活的种种风景。无论是面对困难还是享受幸福,我们都要珍惜每 ·个瞬间,努力追寻自己的梦想。因为只有在这样的过程中,我们才能发现人生的真正意义,挑战和美好之处。愿每个人都 能在这场旅程中找到属于自己的幸福和意义。

Formatted Evaluation Example from DeepSeek-R1 Total Score: 7.0

1. 文章中心观点较为明确, 但<mark>表述略显泛泛, 未深入探讨深层思考</mark>。例如, '人生的意义在于贡献'未结合社会结构或哲学理 论展开

- 2. 中心论点易于提炼为'人生的意义在于贡献、挑战促进成长、美好在于点滴',但过于直白,缺乏新意。
- 3. 开篇首段即提出中心论点, 符合'引言明确'要求。
- 4. 仅停留在个人价值层面,未涉及如存在主义、集体主义等深层理论,缺乏文化纵深感。
- 5. 对挑战与成长的关联有基本洞察,但未触及现代青年的价值迷茫等现实痛点
- 6. 论据与'贡献''挑战''美好'的关联明确,但医生/艺术家案例与高中生生活距离较远。
- 6. 仅使用职业案例和抽象描述,缺乏具体历史事例(如曼德拉)或文学典故支撑。医生拯救生命'等论据未说明具体案例, 详实度不足。案例集中于职业选择,未覆盖家庭、友谊等其他人生维度。
- 7. 未引用具体数据或文献, 真实性无法验证但无逻辑硬伤。
- 8. 论据来源仅限个人经历观察,缺乏跨学科引用。 9. 使用举例论证(医生/艺术家)和对比论证(挑战vs美好),但缺少引用论证(名人名言)等手法
- 10. 职业案例论证自然,但'美好在点滴'部分转为抒情,论证断层。
- 11. 未使用统计数据或他人观点,此项不适用。
- 12. 完全未提及对立观点(如虚无主义对人生意义的质疑)
- 13. 单方面论证,未处理反方观点。举例与对比论证未能形成互补效应,例如未用数据佐证案例代表性。
- 14. 三个主体段分别对应中心论点,但'挑战促进成长'与'美好在点滴'之间逻辑断裂。
- 15.采用并列结构而非递进结构,如未说明挑战如何导向美好。
- 16. 每个段落均有案例支撑,但'美好'段以抒情代替论据。
- 17. 段落间用'人生中的...'句式过渡,机械但有效。
- 18. 贡献段用职业案例论证, 与论点重要性匹配度不足。
- 19. 用词规范但平淡,如重复使用'旅程'等隐喻,未出现'异化''自我实现'等精准术语。
- 20. 逻辑推进清晰,但'美好'段突然转为感性描写破坏理性基调。
- 21. 以陈述句为主,缺少反问、排比等句式变化。
- 22. 未使用专业术语,此项不适用。
- 23. '璀璨的光芒'等比喻增强感染力,但未服务核心论证。
- 24. 结尾用'旅程'呼应开篇'冒险',结构完整
- 25. 总结三个分论点但未升华(如联系人类共同命运)
- 26. 呼吁'找到幸福'流于表面,未提出具体行动指引(如终身学习)。

Figure 12: Median-quality Essay and Evaluation Example.

Essay from DeepSeek-Chat

Prompt:以人生为主题写一篇800-1200字的议论文,探讨人生的意义、挑战和美好之处,适合高中生阅读,要求使用优美的语言和有力的论据,结构清晰,分为引言、

好的礼物之一。"对于高甲生而言,与朋友之间的相互支持、理解和陪许,个仪能够帮助我们度过难关,更能为我们的生活增添色彩。MMT最后,人生的美好还在于我 们能够不断成长和进步。每一次的挑战和困难,都是我们成长的机会。通过不断努力,我们能够逐渐接近自己的目标,实现自己的梦想。这种成长的过程,本身就是 一种美好。ININ**结论**ININ人生一场充满意义、挑战与美好的旅程。对于高中生而言,理解人生的意义、勇敢面对挑战,发现生活的美好,不仅有助于个人的成长 更能为未来的生活奠定坚实的基础。人生的意义在于追求幸福、实现自我价值,同时也在于为他人、为社会做出贡献。人生的挑战虽然艰难,但正是这些挑战塑造了 我们的性格,锻炼了我们的意志。人生的美好则在于青春、情感联系以及不断成长的过程。愿每一位高中生都能在这场旅程中找到属于自己的意义,勇敢面对挑战, 享受生活的美好。

Formatted Evaluation Example from DeepSeek-R1 Total Score: 8.7

文章中心观点清晰,明确探讨人生的意义、挑战和美好,<mark>适合高中生阅读</mark>。 中心观点易于提炼,引言和结论部分明确概括。 2. 3. 开篇直接提出中心论点,结构明确。 虽引用哲学观点,但对社会、文化的深层次探讨较浅,例如加缪的荒诞哲学未深入展开。 体现出对青少年成长的洞察,但缺乏更具批判性的思想见解。 论据与论点关联紧密,如亚里士多德对应意义,罗杰斯对应挑战。 Δ 5 6. 每个论点至少一个论据,但学业压力等例子较为常见,创新性不足。 8. 哲学引述较简略,未展开详细分析。 9 引用加缪、刘易斯等具有代表性。 10. 数据来源真实可靠。 11. 涵盖哲学、心理学、文学等多领域。 12. 使用引用和举例论证,但缺乏对比论证。 13. 论证方法运用自然,如用罗杰斯理论解释挑战。 14. 统计数据未出现,但引用观点时有简要分析。 15. 未提及对立观点,如未讨论'享乐主义'等不同人生观。 16. 单一视角论证, 未兼顾不同观点 方法间协同效应一般,如哲学与心理学论证未形成互补。
 小论点均围绕中心论点展开。
 意义→挑战→美好为并列结构,递进性较弱。 20. 每个段落有对应论据支撑。 21. 段落间有'此外''最后'等过渡词 22. 学业压力段落论证强度匹配论点重要性。 23. 用词优美,如'荒诞''自我实现'准确。 24. 逻辑连贯,但部分语句如'青春本身就是一种美好'稍显主观。 25. 句式多样,长短句结合。 26. 比喻(人生如旅程)增强感染力。 27. 结尾呼应开头'旅程'比喻,结构完整。 28. 总结意义、挑战、美好而非简单重复 29. 提出'找到属于自己的意义'的呼吁,具启发性。

Figure 13: High-quality Essay and Evaluation Example.