

# Evaluation of an Online Teaching Model for Academic English Writing: Insights from Chinese EFL College Teachers

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## Abstract

*This study addresses the challenges faced by Chinese EFL (English as a Foreign Language) college students in academic English writing, specifically the need for effective and accessible online teaching models. The research explores the feasibility and effectiveness of a newly designed online academic writing model aimed at improving students' writing skills. A mixed-methods approach was employed, using questionnaires and semi-structured interviews with TEFL teachers to collect data. The findings show that the model is well-received by both teachers and students, with notable improvements in writing performance, cultural relevance, technology integration, and accessibility. However, the study also identifies challenges, such as the limitations of AI-supported feedback and the need for better collaborative learning activities. The research concludes that the model holds promise for enhancing academic writing instruction, providing a foundation for future improvements and offering implications for designing effective online language learning tools tailored to Chinese EFL learners.*

**Keywords:** *Online Teaching Model, Academic English Writing, EFL, Chinese College Students, Technology Integration.*

## Introduction

Academic writing is considered one of the keys to success in higher education. The proficiency in academic English writing is crucial for Chinese EFL (English as a Foreign Language) college students, especially considering the globalized context of higher education and the increasing demands for academic excellence (MOE, 2020a). However, the complexity of academic English primarily hampers students' performance (Cheung, 2023; Cui et al., 2022). Academic English writing requires students to present their arguments in a formal and serious tone (Hyland, 2019; Zaki & Yunis, 2015). Equally important, academic writing skills demand that students engage with, analyze, organize, and develop their own ideas based on relevant information, articulating those ideas in a logical manner (Mallia, 2017). Given these factors, it is not surprising that students from non-English-speaking countries often face numerous challenges. Despite the complexities of academic English, there is no singular best practice for teaching it for instructors must impart a range of writing skills, including content development, writing processes, and language frameworks (Hyland, 2019; Macalister & Nation, 2019).

The challenges of teaching academic English are not only difficult for students, but teachers also face issues in delivering effective instruction. Mose & Mohamad (2019) found that classroom teaching becomes complex due to varying levels of student learning in a single class. Jones-Mensah and Hilton (2024) similarly noted this issue and emphasized the importance of flexible and adaptive teaching methods in the classroom. High-quality teaching has consistently been a significant topic of discussion in academic English teaching. Burrough et al., (2019) emphasized that quality teaching is essential for enhancing student learning outcomes. But the quality of teaching is suggested to be affected by limited teaching best practice (Bragg et al., 2021; Ko, 2017), inappropriate schedule arrangements (Zhang & Zou, 2020) and a lack of technology proficiency in online teaching (Straub et al., 2020). Nevertheless, traditional teaching environments fail to address the challenges faced by teachers and students, such as insufficient contextualization and varying student abilities (Bergdahl, 2022). This situation underscores the need for innovative approaches that integrate technology into teaching, creating a more engaging and effective learning environment for

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students during the design phase.

In the design and developmental stage of an online academic English writing teaching model for Chinese EFL college students, the structural construction relied on needs analysis and previous literature review, resulting in the identification of essential elements and sub-elements for the model. The experts' panel consensus by utilizing the Fuzzy Delphi method, it reached a consensus on the categories, elements and priority order involved in the model and the main elements are Culturally contextualized courses, Interactive writing session, Collaborative peer review session, AI-assisted writing feedback, Synchronous online writing labs and Writing E-portfolio in priority order. The illustration of the model is included in the Appendix.

This study aims to evaluate the effectiveness of the designed online teaching model for teaching academic English writing. The primary objectives of the research are to assess the feasibility of the model's components and evaluate its effectiveness in online academic English writing teaching for Chinese EFL college students using the model.

## Literature Review

The approach to online learning is diverse, encompassing blended instruction and fully online formats. Blended instruction combines face-to-face teaching with computer-supported learning. Fully online instruction utilizes online resources and learning management systems for guidance, with no traditional classroom elements in this method (Garrison, 2016). Many countries have promoted online learning, especially post-pandemic, garnering significant attention (Bailey & Hatcher, 2021; Li & Huang, 2020). However, in the context of English language learning in China, fully online courses are not the norm and pose linguistic guidance challenges for teachers (Fan, 2020), while also being a daunting task for students unfamiliar with online learning.

Online teaching methods, including blended learning and flipped classrooms, are widely used in TEFL and TESL. Technological aids in language education have been in use since the 1970s (Means et al., 2013; Blake, 2011). Since then, the field has continuously evolved as universities and educational institutions globally began to adopt language technology tools (Halim & Hashim, 2019; Kessler, 2006). The impact of the pandemic has necessitated the widespread implementation of fully online teaching in China, prompting educators and relevant administrators to decide on the types of learning management systems, online communication platforms, implementation tools, and associated electronic resources to ensure the effectiveness of online English instruction (Gao & Zhang, 2020).

Research indicates that online learning can be as effective, if not more so, than traditional face-to-face instruction. Blake (2011) emphasized that the computer-mediated communication could complement the modern language teaching and provide conducive environment for language learning with proper integration. Means et al. (2013) conducted a meta-analysis of online learning studies and found that students in online settings performed modestly better than those receiving face-to-face instruction. This is attributed to the interactivity, diversity of resources, and the ability for students to learn at their own pace, which are inherent advantages of online platforms (Ko, 2017). The benefits of online teaching environments are numerous. One can learn anywhere and anytime using electronic devices (Bank, 2020). There is also more time to reflect and respond, along with greater flexibility in learning (Zhang & Zuo, 2022). For language learning, online education can provide various real-time and non-real-time activities that enhance professional development (Wang et al., 2019). However, many teachers find the rapid shift from face-to-face classrooms to online instruction challenging, especially those without prior online teaching experience (Zhang & Hyland, 2018). Language instruction faces particular difficulties in adapting to this new online landscape, from implementing lessons to conducting activities (Bailey & Lee, 2020). Therefore, for TEFL online classrooms, it is essential to set realistic online teaching objectives, avoid common online teaching challenges, and design suitable teaching activities for the online format.

Despite the numerous advantages of online teaching, challenges remain during live online courses and activities. Electronic activities may hinder students' focus and affect classroom engagement (Bergdahl, 2022; Wen, 2019). Additionally, common technical issues such as audio and video problems can disrupt online

instruction (Halim & Hashim, 2019). In language teaching settings, the lack of face-to-face interaction remains a drawback of online teaching (Moser & Brenner, 2021). Course design for online platforms can also face challenges, especially when teachers are unfamiliar with how online courses operate (Luan et al., 2023). Although the aforementioned challenges persist, educators and administrative bodies still need to develop and design innovative solutions and optimization measures to achieve the goals of online instruction.

## Methodology

### *The Context and Participants*

This study received ethical approval from the ethics committee of the corresponding author's institution. The study took place at a public comprehensive university in the eastern district of China. A total of 25 teachers participated in the model illustration course, and 23 of them agreed to take part in the study. They all signed consent forms, indicating their willingness to share their information in data collection, analysis, and findings.

The sample selection employed a purposive sampling method, which maximizes the connection between the sample selection and the research objectives (Suri, 2011), thus ensuring the rigor and credibility of the research data and results. Participants were selected based on three criteria:

- In-service teacher with at least 1 year teaching experience
- Teaching subjects related TEFL, TESL, Education and Technology ect.
- Related research background

A total of 23 teachers ultimately participated in the experimental survey, with 20 involved in the questionnaire survey and the other three in the interview survey.

### *Data Collection and Analysis*

This study utilized a mixed-methods approach, combining quantitative and qualitative data collection methods to evaluate the online teaching model. The overall research procedure is shown in Table 1.

**Table 1. Data Collection and Analysis**

Research Objective	Research questions	Tools	Data Analysis

To evaluate the effectiveness of designed online teaching model for academic English teaching	1 What is the feasibility of the components that are suggested in the online teaching model?	Questionnaire (n=20)	Descriptive Analysis
	2 What is the effectiveness of implementing the designed online teaching model to improve EFL college students' academic writing performance in China?	Semi-structured Interview (n=3)	Thematic Analysis

The first part of this study involved an online questionnaire survey of 20 TEFL teachers using a 5-LIKERT scale tool via WENJUANXING online platform to collect data. The questionnaire included 23 prompts in total, analyzing their perceptions of the model's effectiveness, satisfaction, and contributed learning outcomes. The obtained data underwent analysis through the SPSS system, leading to relevant main findings. Another part in this phase came from interviews with three teachers. These semi-structured online interviews provided qualitative data, which was analyzed using content analysis techniques to yield corresponding findings.

#### *Instrument for Online Questionnaire*

To analyze the feasibility of the elements in online teaching model, an online questionnaire was used to collect data. It consisted of 4 parts, demographic information, satisfaction of the model, effectiveness of the model and anticipated learning outcome of the model. The design of the evaluation questionnaire is based on usability model (Abran et al, 2003) and consisted in total 23 items with the tool of 5-Likert Scale (1 indicates strongly disagree, 2 indicates disagree, 3 indicates neutral, 4 indicates agree, 5 indicates strong agree). The questionnaire investigated participants response from three aspects: effectiveness, satisfaction and learning outcome. At the end of the questionnaire, an open-ended question related "Comments" was added. The distribution of the questionnaire is shown in the Figure.1 It included both QR code and URL for easy access.



**Figure 1. Distribution of the Online Questionnaire**

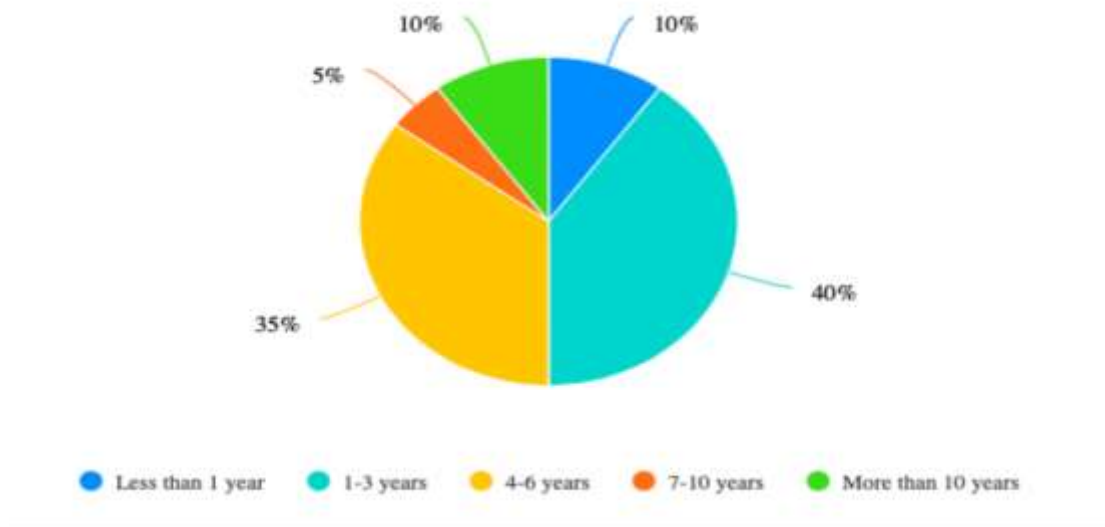
#### *Instrument for Semi-structured Interview*

A Semi-structured interviews with three teachers provided in-depth insights into the model's feasibility and evaluation in teaching academic English writing. The interviews occurred online via Tencent Meeting, with questions designed to explore opinions towards the elements in the model, its effectiveness, possible challenges and further improvements. A thematic analysis, a qualitative method, was employed to analyze the interview data, identifying recurring themes in the responses.

## **Findings**

*Findings on Feasibility of Elements in the Model**Demographic Information*

Data analysis was conducted based on responses from 20 participants. Their contributions provided a sufficient sample for this study, depicting demographic information through two dimensions: teaching experience and teaching fields. The teaching experience and distribution can be seen in Figure 2.



**Figure 2. Teaching Experience Distribution**

In this figure, teaching experience spans from less than one year to over ten years, and all participants possess some level of teaching experience. Notably, 75% of the sample has between 1-6 years of teaching experience, while veteran teachers with rich experience and less experienced young teachers each constitute 10% of the sample.

*Effectiveness of the Model*

The effectiveness part in the survey for the model focused on the second part of the questionnaire, which examined respondents' acceptance with the elements designed in the model. This section contained six question prompts. The Cronbach Alpha value for this part of the questionnaire was 0.843, surpassing the threshold of 0.8, indicating a high level of acceptance. (See in Table 2).

**Table 2. The Cronbach Alpha Value for Questionnaire Part 2**

Sample Size	Items	Cronbach Alpha
20	6	0.843

**Table 3. Descriptive Analysis of items for Questionnaire Part 2**

Rank	Items	Mean	Standard Deviation	Level of effectiveness
1	Interactive writing sessions enhance students' engagement and motivation.	4.75	0.44	Very High
2	Collaborative peer review sessions help students develop better writing skills through structured reviews	4.50	0.51	Very High

Rank	Items	Mean	Standard Deviation	Level of effectiveness
3	The culture-embed and contextualized courses improve students' language proficiency	4.40	0.50	High
4	AI technology-assisted writing feedback is accurate and relevant to students' needs.	4.40	0.50	High
5	The integration of technology in culture-embed and contextualized courses enhances the learning experience.	4.40	0.50	High
6	Synchronous online virtual writing labs provide effective technical support for students.	4.35	0.59	High

It found that the response from participants towards six elements in the model were quite positive. In terms of culturally contextualized course, teachers admitted that this can help improve Chinese EFL students' language proficiency ( $M=4.4$ ,  $SD=.50$ ). Teachers also believed that interactive writing session could enhance students' participation and engagement ( $M=4.75$ ,  $SD=.44$ ). They also confirmed the effectiveness of Collaborative peer review session in students' better writing performance ( $M=4.5$ ,  $SD=.51$ ). AI-assisted writing feedback ( $M=4.4$ ,  $SD=.50$ ) and synchronous online writing labs ( $M=4.4$ ,  $SD=.59$ ) were also confirmed effective to students' needs and support. The participants also believed that the integration of technology into culturally contextualized courses could be conducive to students' learning experience and outcome ( $M=4.4$ ,  $SD=.50$ )

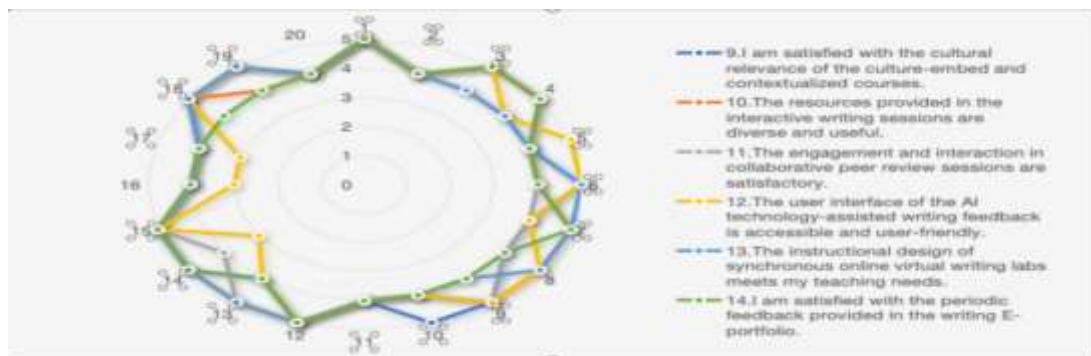
#### *Satisfaction of the Model*

The satisfaction with the online English writing teaching model for Chinese EFL undergraduates was evaluated in the third section of the questionnaire, which contains six questions related to satisfaction. Overall, participants express a high degree of contentment with the model's design. Notably, the Cronbach's alpha value stands at 0.876, indicating the reliability of this satisfaction result of the survey (See in Table 4) .

**Table 4. The Cronbach Alpha value for Questionnaire Part 3**

Sample Size	Items	Cronbach Alpha
20	6	0.873

As is shown in the Figure 3, all of 20 participants expressed high Likert scale (ranging from 3-5) towards the model's satisfaction.



**Figure 3. Likert-Scale Distribution on Model's Satisfaction**

Subsequently, data from 20 participants underwent SPSS descriptive analysis (see Table 5).

**Table 5. Descriptive Analysis of Items in the Satisfaction of the Model**

Rank	Items	Mean	Standard Deviation	Level of satisfaction
1	I am satisfied with the cultural relevance of the culture-embed and contextualized element.	4.55	0.51	Very High
2	The resources provided in the interactive writing sessions are diverse and useful.	4.55	0.51	Very High
3	The elements of synchronous online virtual writing labs meets my teaching needs.	4.50	0.51	Very High
4	The engagement and interaction in collaborative peer review sessions are satisfactory.	4.35	0.49	High
5	I am satisfied with the periodic feedback provided in the writing E-portfolio element.	4.35	0.49	High
6	The user interface of the AI technology-assisted writing feedback is accessible and user-friendly.	4.35	0.75	High

The results illustrate a general satisfaction among 20 participants regarding the six key elements presented in the online teaching model. In the culturally contextualized course, all participants found the consideration of cultural background satisfactory ( $M=4.55$ ,  $SD=.51$ ). Similarly for the interactive writing sessions, all participants acknowledged the usefulness and richness of the diverse teaching materials involved in the interactive writing sessions ( $M=4.55$ ,  $SD=.510$ ). Participants deemed the levels of student engagement and collaboration in collaborative peer review session as commendable and acceptable ( $M=4.35$ ,  $SD=.489$ ). The instructional design and support included in the synchronous online writing labs also met the challenges and needs faced by instructors ( $M=4.50$ ,  $SD=.513$ ). Moreover, in the online writing e-portfolio, periodic feedback for students received broad recognition and satisfaction among respondents ( $M=4.35$ ,  $SD=.489$ ). One point of note is that, within the AI-supported writing feedback, one participant remained neutral regarding the accuracy and effectiveness of feedback received by students while others regarded satisfactory ( $M=4.35$ ,  $SD=.745$ ). This higher deviation warrants the researcher's attention and would be further discussed in subsequent sections. The findings from this satisfaction part on the model presents a rather high and coherent approving attitude from the respondents.

#### *Learning Outcome of The Model*

Learning outcome of the model is the last part designed in the questionnaire and consisted 8 prompt in total. The descriptive analysis of the questionnaire results demonstrates that the developed online academic English writing model is well-received by participants, effectively enhancing students' writing skills and preparing them for standardized tests in China. Besides, the high mean scores and low variability further support the model's efficacy and the reliability of the evaluation tool used.

The Cronbach's Alpha is shown in the table below. The high Cronbach's Alpha (0.870) suggests good internal consistency among the questionnaire prompts, making this part in the questionnaire a reliable tool for evaluating the developed online academic English writing model (see Table 6).

**Table 6. The Cronbach's Alpha Value for Questionnaire Part 4**

Sample Size	Items	Cronbach Alpha
20	8	0.870

As is shown in the Figure 4, all of 20 participants expressed high Likert scale (range from 4-5) towards the model's contribution to learning outcome.



Figure 4. *Liker-scale Distribution on Leaning Outcome*

Data collected from 20 participants received all positive feedback across all elements (overall average  $M=4.53$ ) and it found the model's effectiveness in various aspects of academic English writing (see Table 7)

Table 7. Descriptive Analysis of items in Learning Outcome

Rank	Items	Mean	Standard Deviation	Level of Agreement
1	The interactive writing element in the model enhances students' writing skills.	4.70	0.47	Very High
2	Writing E-portfolios elements helps guiding students' progress over time.	4.60	0.50	Very High
3	The synchronous online virtual writing labs facilitate real-time interaction that benefits students' learning.	4.50	0.51	Very High
4	The culture-embed and contextualized element benefits students' culture awareness in writing.	4.45	0.51	Very High
5	AI technology-assisted writing feedback helps students make more accurate revisions in their writing.	4.45	0.47	High
6	The interactive writing sessions element leads to higher student motivation and engagement in writing tasks.	4.45	0.52	High
7	Students produce higher quality writing after participating in collaborative peer review sessions.	4.45	0.49	High
8	The model effectively prepares students for standardized English tests in China's higher education context.	4.15	0.76	High

The results found a general agreement on the learning outcome generated from this model. Among the 8



prompts, the mean scores for all items are above 4 and the average mean score is  $M=4.53$ , indicating a high level of agreement among respondents regarding the effectiveness of the developed online academic English writing model for improving students' performance.

It is worth noting that in the 21st question, which states that this model can effectively assist students in the interactive writing sessions lead to increased student motivation and engagement in writing tasks ( $M=4.70$ ,  $SD=.47$ ). Additionally, the consensus among participants regarding this effectiveness was also notably high, further validating the model's efficacy in assessment. Equally noteworthy is that the following three aspects of the model received the same sub-average level of recognition from participants ( $M=4.45$ ,  $SD=.51$ ): improved cultural awareness in writing after taking culturally contextualized sessions, adapting to and preparing for standardized tests within the context of Chinese higher education, and AI-assisted writing feedback that aids students in making more precise revisions in their writing.

#### *Open-Ended Question Feedback*

The final question of the questionnaire is an open-ended one, asking for suggestions regarding the online academic English writing teaching model. Among the 20 participants, 10 provided their feedback, which mainly fell into "innovative".

The keyword is "innovative." More than five teachers noted that this model represents a significant innovation in Chinese higher education, incorporating the latest technological educational concepts. One teacher remarked, "*I find the synchronous online writing lab to be highly innovative,*" while another stated, "*The design of this model is exceptionally innovative, integrating artificial intelligence technology.*"

#### *Findings on Evaluation Online Teaching Model for Teaching Academic English Writing*

##### *Demographic Information*

Three selected participants via purposive sampling method in semi-structured interview are:

- A novice lecturer with no more than 2-year teaching experience in the field of TEFL
- An intermediate lecturer with 5-year teaching experience in the field of Education and Technology (writing field excluded)
- A senior lecturer with extensive teaching experience in the field of TEFL/TESL and Writing Pedagogy.

The main findings from the thematic analysis are generalized in the table (see Table 8 and themes merged were illustrated in the model's strength, challenges and further improvement.

**Table 8. Summary of Main Themes on Evaluation of Online Teaching Model**

RQ 2. What is the effectiveness of the designed teaching model in academic writing teaching?		
1	Model's Strengths	Cultural Relevance and Engagement
2		Technology Integration
3		Accessibility and Flexibility
4	Challenges	AI-supported Feedback
5		Interactive and Collaborative Teaching and Learning
6	Further Improvements	Professional Development for Culturally Contextualized Teaching
7		Overcoming Digital Divide

##### *Model 's Strength*

### *Theme 1: Cultural Relevance and Engagement*

The main merit emerged lies in incorporating the cultural context into the teaching of EFL university students in China. Such culturally context integration significantly enhances student engagement in the writing.

Experienced senior teacher noted, “*Students connect better with the material if the course relates closely to their own culture or educational background. This integration of cultural context deepens students' comprehension of the teaching materials and content*” (L19-21). Intermediate teachers echoed this sentiment in interview, emphasizing that “*the cultural embedding in this model is effective. The integration of this cultural contextual background makes the instructional content more accessible, thus promoting better learning outcomes*”(L16-18).

### *Theme 2: Technology Integration*

Integrating effective technological tools into online academic English teaching models offers significant advantages. It fosters interaction among students and between students and teachers. This integration aids in enhancing the learning outcomes and experiences of Chinese EFL university students.

The senior teacher noted, “*technology integration at various stages allows students to experience different learning modalities and styles.... The use of technology in this model supports the writing process without overwhelming it*”(L31-34).

The intermediate teacher emphasized, “*this is quite promising, in incorporating technology into teaching, as it enhances interaction within the educational process and encourages active student engagement. This, in turn, boosts their participation and interest in learning*” (L20-23).

### *Theme 3: Accessibility and Flexibility*

The accessibility and its flexibility of this online model stands out as a significant advantage, especially for students in other remote within Anhui, China. This section underscores the equity of high-quality teaching drawn from a broader educational context.

The senior teacher noted, “*from a broader sense, this teaching model allows students from schools lacking abundant teaching resources to engage in and benefit from writing guidance. This expansion of educational resources compensates for the limitations of traditional methods, which is quite impressive*” (L50-53).

The novice teacher pointed out, “*the model has taught me how different teaching designs and setups can address students' varying requirements. Additionally, due to its online nature, this model encourages greater student participation in writing activities*” (L68-70).

### Challenges

#### *Theme 4: AI-supported Feedback*

Despite the timely feedback provided by AI technology, concerns arise regarding its ability to deliver nuanced, personalized feedback for students' writing .

The senior teacher noted, “*AI-supported feedback excels in basic aspects of academic writing, such as vocabulary and grammar,.....but falls short in offering effective feedback on higher-order critical thinking skills*” (L70-73).

The intermediate teacher acknowledged, “*AI-driven feedback systems can be useful, yet emphasize the importance of appropriate student usage and be caution against completely relying on them for feedback*” (L53-55) .

#### *Theme 5: Interactive and Collaborative Teaching and Learning*

Interactive teaching and collaborative learning have received broad recognition, especially regarding

students' engagement, motivation, and performance improvements. However, concerns arise around effectively organizing and guiding these interactive and collaborative teaching activities.

Senior teacher put it, *“interactive teaching can enhance student participation.....Peer feedback provides students with excellent opportunities to develop critical thinking and reflect on their writing challenges..... Yet, these processes depend heavily on instructional guidance from teachers and active participation from students, presenting difficulties that need to be addressed”* (L50-52; L60-62).

Intermediate teacher emphasized the necessity of collaborative learning. *“It not only boosts student motivation but also fosters teamwork and critical thinking skills”* (L39-40).

Novice teacher also highlighted, *“interactive teaching and collaborative peer assessment are crucial components of academic writing instruction..... However, it is essential to consider how to guide and set up these instructional activities”* (L40-41; L47-48).

### *Further Improvements*

#### *Theme 6: Professional Development for Culturally Contextualized Teaching*

To maximize the effectiveness of culturally contextualized courses, this model needs to enhance the professional development modules offered to teachers. These enhancements will support teachers in effectively delivering cultural context courses and provide them with teaching strategies tailored for cultural contexts.

Experienced teacher noted, *“teaching in cultural contexts is valuable.... However, it largely depends on the instructors' understanding and execution of the teaching material. Therefore, necessary training, guidance, and teaching skills are vital for assisting teachers in conducting such courses effectively”* (L106-108).

Intermediate teacher echoed the importance of cultural integration in teaching. He also pointed out, *“it need to develop effective methods for conducting culturally activities”* (L92). To improve culturally contextualized teaching, providing professional development modules to teachers is essential and indispensable.

#### *Theme 7: Overcoming Digital Divide*

Addressing the digital divide aims to ensure all students have equal opportunities and access to the technological resources used in this online academic English writing teaching model. This approach targets the discrepancies in digital resources.

The intermediate teacher proposed this improvement. He believed that *“bridging online digital disparities can assist students lacking these technological resources.... Besides, we have to consider what could be alternative options for this model when these students cannot access the online model”* (L70-72; L92-93).

Evaluation involves two stages: a quantitative questionnaire and a qualitative interview. The perspectives of different experienced teachers provide insights into the model's effectiveness in its components and implementation. Findings from the questionnaire highlight the model's effectiveness, receiving high affirmations regarding its usability, satisfaction, and learning outcomes on elements involved in the model. The semi-structured interviews feature feedback from three teachers with varying teaching experiences, emerging themes include the model's strengths, challenges, and areas for improvement.

## **Discussion**

### *Model Effectiveness*

The results of this study validate the effectiveness of the proposed online academic writing model in addressing key challenges faced by Chinese EFL students. The model's development, driven by a thorough

needs analysis, aligns with Maclister & Nation (2019)) assertion that effective educational models must be tailored to the specific needs of learners. By focusing on culturally relevant content and integrating technology, the model provides a responsive approach that not only addresses language skills but also engages students in meaningful, contextualized learning experiences. Recent literature similarly supports the importance of cultural contextualization, with Strauß & Rummel (2020) and Lee (2020) emphasizing that culturally relevant teaching materials promote higher levels of student engagement and academic performance. This study adds to the growing body of evidence showing that incorporating culturally relevant elements into academic writing model improves both engagement and learning outcomes.

The online environment's role in fostering greater learner autonomy and engagement is consistent with findings from Garrison (2016) and Ranalli & Yamashita (2022), who argue that digital platforms provide personalized feedback, foster interactive learning, and facilitate self-regulated learning. Their studies found that an effective online environment characterized by timely feedback and communication positively influences academic English writing. The current study extends these conclusions by demonstrating that online tools not only support the development of technical writing skills but also enhance students' overall engagement with academic writing. In particular, interactive platforms enabled students to receive immediate, actionable feedback and engage in peer review processes, enhancing their involvement in the learning process (Gao et al., 2023). This observation is corroborated by the research of Sun & Soden (2021), which indicates a positive correlation between student engagement, motivation, and learning results. Therefore, maximizing student participation and motivation in online teaching environments is crucial.

However, one limitation of this study is its reliance on self-reported data. While the participants indicated high levels of satisfaction with the model, self-reports can introduce biases, as students may overestimate their improvements due to social desirability or misinterpretation of their progress (Bragg et al., 2022). Future research should incorporate objective measures, such as pre- and post-tests or direct assessments of writing quality, to provide more reliable evidence of the model's impact on writing proficiency.

#### *Discussion on Model's Strengths*

A standout feature of this model is its emphasis on cultural contextualization, which has been shown to increase student engagement and improve academic performance. By embedding culturally relevant materials into the writing tasks, the model enabled students to see the practical applications of their writing in real-world contexts, enhancing both their motivation and their writing ability. This finding is consistent with previous researches (Mallia, 2017; Gay, 2018; Lee, 2020). Integrating culturally contextualized teaching guidance with related courses is believed to positively impact students' learning outcomes (Lee, 2020) and supports the practical application of foundational skills in relevant fields (Gay, 2018). Strauß & Rummel (2020) further supports this, noting that culturally contextualized teaching not only enhances language skills but also helps students better understand academic content, making the learning process more impactful.

Another significant strength is the model's integration of technology. Previous studies, such as those by Ko (2017), Strobl et al. (2019) and Jones-Mensah and Hilton (2024), have demonstrated that digital tools, such as automated essay scoring systems and writing support software, can significantly enhance students' technical writing abilities. This study extends that research by showing that the online model's technological tools helped students improve grammar, vocabulary, and overall writing performances. Additionally, the use of collaborative platforms for peer review was a major advantage, aligning with Johnson et al. (2024), who emphasize the role of peer feedback in building a learning community. Peer interactions facilitated through the model allowed students to critique each other's work, fostering an environment of collaborative learning that improved both technical writing and critical thinking skills.

While these findings align with previous research, this study differs in its holistic approach. Rather than focusing on isolated aspects of writing, such as grammar or lexical choice (Storch & Tapper, 2009), the current study explores how combining cultural contextualization, technological tools, and collaborative learning leads to comprehensive improvements in academic writing. This broader view contributes to the literature by demonstrating that an integrated model, rather than a focus on individual components, is more effective in enhancing the overall quality of academic writing. Moreover, the emphasis on technology-driven

pedagogical strategies highlights the need for educators to remain adaptable and responsive to the dynamic landscape of digital learning tools.

### *Discussion on Challenges*

Despite the strengths, several challenges arose that need further investigation. A major concern identified in this study is the limited precision of AI-assisted feedback, which is consistent with findings from Zhang and Zou (2022) and Cui et al. (2023). While AI tools are effective at identifying micro-level issues like grammar and spelling, they often fall short when addressing higher-level aspects of writing, such as argument coherence, content depth, and organizational structure (Strobl et al., 2019; Zhang & Zou, 2020). The results of this study confirm that AI tools, although valuable for surface-level corrections, are insufficient for providing comprehensive feedback on the broader elements of academic writing. It is also noteworthy that the contribution of AI-assisted writing tools to the improvement of writing skills and enhancement of overall writing quality is minimal. This implies that these tools predominantly offer feedback on detecting written works rather than on the writing process itself. Such shortcomings necessitate further support from teachers to provide effective feedback to students. This limitation is echoed by Tatal (2023), who argue that AI tools should be complemented by teacher feedback to ensure that students receive holistic support for improving the quality of their writing.

In addition to the limitations of AI tools, this study also highlighted challenges in managing interactive and collaborative learning in an online environment. Previous researches have shown that collaborative learning can enhance student outcomes by encouraging peer feedback (Ko, 2017) and active engagement (Radkowsch et al., 2020; Straub et al., 2020). However, the success of collaborative activities in online settings requires careful teacher facilitation. Chen et al. (2018) stress that teachers must actively guide the collaborative process to ensure that students are meaningfully engaged and that interactions remain productive. Specifically, teachers need to manage the entire learning process and intervene when necessary to stimulate communication and interaction among students (Straub et al., 2020). As described, effective management is a demanding task for teachers, requiring experience and training in this area. In line with these findings, this study emphasizes the role of teachers in managing online collaborative environments. Teachers must provide clear guidance, monitor student participation, and intervene when necessary to ensure that the collaborative process contributes to meaningful learning. On the other hand, to assist teachers in creating an effective interactive teaching environment, informing them in advance about the optimal timing for interactive lessons and when to provide support is also necessary.

Another challenge identified in this study is the need for ongoing professional development for teachers. The importance of teacher training in effectively utilizing digital tools and managing online classrooms has been widely acknowledged (Means et al., 2013; Bragg et al., 2022). This study reinforces the idea that educators must receive continuous professional development not only in technology integration but also in online pedagogy and collaborative teaching strategies. Koehler and Mishra (2009) argue that as educational technologies evolve rapidly, teachers need to adapt continuously to effectively use these tools in teaching. Specifically, online professional development encompassing extensive discussions, including the knowledge training and skills required for online instructors (Cohen, 2016) and how to provide effective guidance and interventions (Scholtz & Hughes, 2019) are highlighted in the existing researches. This aligns with the findings of the present study. The findings of this study suggest that, for large-scale implementation of this model, there must be substantial investment in professional development to ensure that teachers are well-prepared to support students in an online learning environment.

### **Conclusion**

This study highlights the potential of integrating culturally relevant content and advanced technology into online academic writing model for Chinese EFL college students. The model proved effective in improving writing skills, increasing engagement, and enhancing accessibility. Its strengths lie in cultural relevance and technology integration, which align well with student needs. However, challenges such as limitations in AI-supported feedback and insufficient collaborative learning opportunities were identified, suggesting areas

for improvement.

The findings underscore the importance of ongoing professional development for teachers, ensuring they can effectively implement and adapt the model. Additionally, the study points to the need for context-specific solutions that address the unique challenges faced by both educators and students. These insights suggest that future online writing tools must evolve alongside technological advances and pedagogical trends.

Ultimately, the research offers a valuable framework for designing effective online academic writing models, with implications for improving EFL education in China and other contexts. Continuous refinement of the model, along with tailored teacher support, will be crucial for maximizing its impact on student outcomes.

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## *Appendix*

### *Illustration of the Model*

This part provides an illustration of how the designed online teaching academic English writing model apply into real scenario and practice to improve Chinese EFL students' writing performance. The illustration of the model is without a specific weekly or monthly structure but in a phased approach. The purpose is to allow for maximum flexibility in adapting to different academic schedules and contexts within China's colleges.

### *Phase 1: Culturally Contextualized Courses*

Objective: Establish a strong foundation for students in culturally relevant and context-specific academic writing.

*Key Activities:*

*Culture Relevance:*

Incorporate culturally relevant topics and examples into writing assignments.

Conduct workshops on understanding cultural nuances in academic writing.

*Language Proficiency:*

Assess students' language proficiency levels.

Provide targeted language support through workshops and tutorials.

*Teaching Writing Strategies:*

Teach various academic writing strategies, such as thesis development, argumentation, and citation practices.

Use sample essays and case studies to illustrate effective writing techniques.

*Technology Integration:*

Introduce and train students on using technology tools like online writing labs, plagiarism checkers, and reference management software.

Create online resources and tutorials for continuous learning.

*Assessment:*

Develop assessment criteria aligned with learning objectives.

Use formative assessments, such as quizzes and draft submissions, to monitor progress.

*Phase 2: Interactive Writing Sessions*

Objective: Enhance student engagement and interaction in the learning process.

*Key Activities:*

*Teachers' Facilitation:*

Conduct interactive lectures and writing workshops.

Provide individualized feedback during office hours or online consultations.

*Engagement and Motivation:*

Use motivational strategies, such as showcasing student success stories and inviting guest speakers.

Incorporate gamification elements, like writing competitions or badges for achievements.

*Multiple Teaching Resources:*

Curate a variety of teaching materials, including videos, articles, and interactive exercises.



Encourage students to explore and utilize these resources for self-study.

*Peer Collaboration and Interaction:*

Organize peer review sessions where students can critique each other's work.

Facilitate group projects and collaborative writing tasks to build teamwork skills.

*Phase 3: Collaborative Peer Review Sessions*

Objective: Develop critical thinking and feedback skills through peer interaction.

Key Activities:

*Structured Review:*

Train students on conducting structured peer reviews using rubrics and guidelines.

Schedule regular peer review sessions as part of the curriculum.

*Engagement and Interaction:*

Foster a supportive peer review environment.

Encourage open and constructive feedback through role-playing exercises and discussion forums.

*Phase 4: AI Technology-Assisted Writing Feedback*

Objective: Utilize AI tools to provide accurate and relevant writing feedback.

Key Activities:

*Feedback Accuracy and Relevance:*

Integrate AI writing feedback tools into the curriculum.

Train students and teachers on how to interpret and act on AI-generated feedback.

*Accessible Interface:*

Ensure all students have access to AI tools through campus resources or online platforms.

Provide technical support and troubleshooting guides.

*Phase 5: Synchronous Online Virtual Writing Labs*

Objective: Facilitate real-time writing support and collaboration.

Key Activities:

*Technical Support:*

Set up virtual writing labs with the necessary technical infrastructure.

Offer technical support to ensure smooth operation of virtual sessions.

*Interaction:*

Conduct real-time writing sessions where students can receive immediate feedback.

Organize virtual office hours and Q&A sessions with instructors.

*Instructional Design:*

Design engaging and interactive writing assignments for virtual labs.

Use multimedia resources to enhance the learning experience.

*Phase 6: Writing E-Portfolio*

Objective: Develop and maintain a digital portfolio showcasing students' writing progress.

*Key Activities:*

*Periodic Feedback:*

Provide regular feedback on students' e-portfolio entries.

Use e-portfolios as a tool for continuous assessment and reflection.

*Usability:*

Ensure the e-portfolio platform is user-friendly and accessible.

Conduct training sessions on how to navigate and utilize the platform effectively.

*Security and Integration*

Implement data security measures to protect students' work.

Integrate the e-portfolio system with other learning management systems used by the institution.

*Content Management:*

Teach students how to organize and present their work in the e-portfolio.

Provide guidelines on selecting and curating content for their portfolios.

*Ongoing Support and Improvement*

Objective: Ensure continuous improvement and adaptation of the learning and teaching process.

*Key Activities:*

Regular Feedback: Collect feedback from students and teachers to identify areas for improvement.

Professional Development: Provide ongoing training and development opportunities for teachers.

Curriculum Review: Periodically review and update the curriculum based on feedback and new developments in the field.

This phased approach ensures a comprehensive and adaptable implementation of the designed online academic English writing teaching model, catering to the specific needs and context of students in China's colleges.