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A Study of Teacher Role Transformation in the Era of Artificial Intelligence in Interpreting Instruction

YUAN Lijuan*
School of International Education, College of Modern Economics & Management of JUFE, Gongqingcheng City, Jiangxi Province, China
***Corresponding author, E-mail: 475315168@qq.com**

Abstract:
As generative AI is increasingly integrated into interpreting instruction, interpreting teachers are confronted with new demands in classroom practice. Drawing on a two-semester teaching practice in a Business English Interpreting course, this study examines how the interpreting teacher has transformed their roles following the introduction of the "Doubao" AI agents into interpreting training. The findings reveal that as the AI agents assume tasks such as immediate feedback and basic error correction, the interpreting teacher's identity undergoes a comprehensive threefold transformation. Specifically, the teacher shifts from a traditional "evaluator" to an "architect of feedback system" who oversees and refines AI output; from a mere "AI user" to a "guide of AI literacy" who scaffolds effective human-AI interaction; and from a strict "error judge" to an "emotional supporter" who alleviates learners' psychological anxiety. This shift suggests that the "Doubao" AI agents and the human teacher are not mutually exclusive in interpreting instruction. Rather, they complement each other across cognitive and affective dimensions, thereby co-constructing a more efficient, engaging, and more humanistic human-machine collaborative teaching environment.

KeyWords:
Artificial Intelligence; the "Doubao" AI agents; Interpreting Teacher; Role Transformation; Human-Machine Collaboration

1. Research Background

As artificial intelligence (AI) technologies continue to mature, their impact on foreign language education has deepened, naturally extending to the specialized field of interpreting instruction. Given that interpreting is inherently a highly cognitively intensive process [6], learners require high-frequency speaking practice and immediate feedback to effectively develop their skills. To meet these rigorous demands, some scholars have recently begun integrating large language models (LLMs) into interpreting classrooms, exploring their potential to address these intensive training demands.

Empirical studies on the application of LLMs in interpreting instruction are currently at a preliminary exploratory stage, yet they have already manifested certain advantages in enhancing interpreting training out-

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comes. At the foundational level of skill acquisition, existing exploration primarily focuses on the application effect of ChatGPT in improving core skills such as students' interpreting output and gisting skills [5]. Beyond direct skill enhancement, researchers have also shifted their lens to the dynamics of evaluative feedback, presenting comparative analyses of how AI feedback (such as Ernie Bot) versus peer feedback differentially influences interpreting learning strategies [4]. Alongside these instructional dimensions, the reliability and reception of AI tools have also drawn academic attention. Specifically, researchers have investigated the differences between ChatGPT scoring and teacher scoring in formative interpreting tests [1], as well as the broader user experiences and attitudes of both interpreting learners and educators towards ChatGPT [2]. Collectively, these pioneering efforts have validated the positive role of LLMs in elevating student interpreting performance, enhancing training flexibility, and boosting learner engagement, thereby driving the development of interpreting instruction in its training modalities, classroom organizational structures, and feedback mechanisms.

However, despite these advancements, the existing literature has largely focused on learner outcomes while overlooking how the implementation of AI reshapes the fundamental role of interpreting teachers – an unexplored area that serves as the primary impetus for the present study. As AI enhances instructional efficiency and assumes foundational tasks, the conventional identity of interpreting instructors becomes increasingly ambiguous. This shift prompts a critical rethinking of what specific instructional duties should still be undertaken by the teacher and how the teacher can best exert their impact in the classroom. Therefore, navigating this role transition has emerged as a highly relevant and pressing issue in higher foreign language education.

2. Research Design

To empirically address this pressing issue and explore the dynamics of this role transition, this study draws upon a two-semester pedagogical practice within a Business English Interpreting course. Focusing on junior students majoring in Business English at the author's university, the research continuously observed classroom practices and the evolving role of the interpreting instructor. Throughout the course, the author utilized the AI agent development platform "Coze" (https://code.coze.cn/home) to design and deploy 23 distinct "Doubao" AI agents. These agents were tailored to specific interpreting skills – such as retelling, summarizing, information structuring, note-taking, sight interpreting, consecutive interpreting of numbers, and general consecutive interpreting – covering a comprehensive 32-week curriculum.

By delivering targeted feedback on students' interpreting output, these AI agents acted as a catalyst for restructuring the teacher's classroom roles. The author embedded tailored reference texts into each agent, closely aligning them with weekly teaching objectives, pedagogical challenges, and specific practice materials. This integration ensures that the agents' feedback remains strictly confined to the prescribed contexts, effectively avoiding generalized or irrelevant responses. Student performances were assessed across four primary dimensions: linguistic accuracy, informational fidelity, logical coherence, and cross-cultural adaptability. Each agent features a distinct functional focus. Some primarily provide immediate feedback, while others use heuristic questioning to guide students' thinking and articulation. Additionally, after multiple attempts, certain agents will offer keyword prompts, structural outlines, and reference translation texts, assisting students in practicing their interpreting skills from diverse perspectives.

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To systematically evaluate the impact of these AI-assisted practices, this study adopts an action research framework to systematically investigate these pedagogical changes and the role transformation. To ensure that the research findings are rigorous and empirically grounded, a multi-source data collection approach was implemented throughout the entire duration of the course. The primary data sources included the teacher's reflective journals, which provided a continuous record of instructional adjustments and classroom dynamics. Furthermore, the AI-generated feedback was collected and analyzed via screenshots submitted by students alongside their interpreting assignments, capturing the specific nature and frequency of the machine-student interactions. These were supplemented by systematic classroom observation notes and in-depth student interviews, which documented the nuances of teacher-led interventions and gathered learners' authentic attitudes toward the necessity of the teacher's role. By triangulating these diverse data sources, this study provides a robust empirical foundation for analyzing how the teacher's role is reshaped in a human-AI collaborative environment, moving beyond purely subjective experience to a systematic examination of classroom practice.

Based on these pedagogical practices and the triangulated data, this paper analyzes the adjustment and transformation of the teacher's role following the integration of the "Doubao" AI agents, aiming to provide a referenceable transition pathway for the professional development of interpreting educators in the era of artificial intelligence.

3. Theoretical Perspectives

Existing theoretical frameworks provide a useful lens for understanding how the teacher's role shifts following the integration of "Doubao" AI agents into the classroom. This study primarily draws upon Social Constructivism, Scaffolding Theory, and the Affective Filter Hypothesis to analyze the reshaping of the teacher's role across two dimensions: cognitive support and emotional support.

From the perspective of cognitive support, Social Constructivism and Scaffolding Theory provide a theoretical foundation for the direction of the teacher's role transition. Social Constructivism (Vygotsky, 1978) emphasizes that learning occurs through social interaction within authentic contexts, where knowledge is negotiated and constructed collaboratively by learners and more capable others (e.g., teachers or peers) engaging in meaningful tasks [8]. Meanwhile, Scaffolding Theory (Wood et.al, 1976) focuses on how the "more capable party" uses modeling, prompts, and feedback to assist learners in accomplishing tasks within their Zone of Proximal Development (ZPD) that they cannot currently manage independently. As learners gain proficiency, this scaffolding is gradually withdrawn, empowering them to complete tasks with greater autonomy [3].

In the present study, the "Doubao" AI agents provide feedback on students' interpreting performances according to unified evaluation criteria, assuming the role of basic practice companions in an encouraging and supportive manner. Such feedback constitutes primarily lower-level cognitive support focusing on vocabulary and grammar. Because each agent is embedded with relevant reference translation texts, it tends to rely heavily on these texts in actual use. When a student's interpreting accurately conveys the meaning with correct grammar, but their way of expression is not entirely consistent with the reference translation text, the AI agent often provides relatively mechanical adjustment suggestions, thereby overlooking the permissible flexibility of interpreting expressions. For this very reason, the interpreting teacher's supplementation and

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expert oversight become particularly essential. First, the teacher needs to rectify the "Doubao" agents' omissions regarding linguistic accuracy and informational fidelity. Furthermore, the teacher must provide more in-depth guidance on content that the AI agents are temporarily incapable of processing, such as pragmatic appropriateness, situational judgment, and cultural understanding. In other words, rather than being replaced by AI technology, the interpreting teacher's role extends to higher-level pedagogical tasks building upon the lower-level feedback provided by the AI agents.

From the perspective of emotional support, the Affective Filter Hypothesis (Krashen, 1982) emphasizes that a learner's emotional state directly influences the outcome of language acquisition [7]. Specifically, when learners are highly anxious, lack confidence, or fear being judged, an "affective filter" creates a psychological barrier between language input and language acquisition. Under these conditions, even if learners receive ample language exposure, the information will struggle to be genuinely absorbed and integrated by the brain. Conversely, when learners are relaxed and feel psychologically secure, this barrier lowers, making them more receptive to language input and more willing to express themselves and make adjustments accordingly [7]. This precisely demonstrates why the teacher's emotional support is irreplaceable and indispensable in the teaching process. Although "Doubao" agents' feedback is stable and immediate, and can provide students with a certain degree of encouragement, it is, after all, a pre-programmed response. The agents cannot promptly perceive students' anxiety, nervousness, or frustration, and struggle to flexibly adjust their feedback methods based on different students' emotional states. If students face the AI agents' technically-oriented corrective feedback over a long period without the teacher's gentle responses and emotional support, they may actually become more inhibited, thereby reducing their willingness to continue practicing interpreting. In contrast, the teacher better understands students' individual circumstances and is more capable of offering comfort, encouragement, and affirmation at critical moments, helping students relieve stress and maintain confidence.

Overall, while "Doubao" AI agents provide rapid, standardized and foundational feedback, the teacher offers higher-level cognitive guidance and emotional care. Rather than replacing each other, the teacher and the "Doubao" AI agents complement one another by fulfilling distinct roles and connecting seamlessly. Together, they constitute the feedback system for the interpreting classroom in this study.

4. The Triple Identity Transformation of the Interpreting Teacher in Human-AI Collaborative Contexts

Guided by the theoretical frameworks discussed above, the integration of "Doubao" AI agents into interpreting instruction has catalyzed a comprehensive restructuring of the interpreting teacher's role within this study. This transformation manifests across three interconnected dimensions: restructuring the feedback system, guiding human-AI interaction, and providing affective care.

4.1 From "Evaluator" to "Architect of Feedback System": Arbiter and Overseer of AI Feedback

In the interpreting classroom, the role of the interpreting teacher is gradually transforming from a unidi-

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rectional evaluator and corrector into an overall architect of the feedback system. The immediate feedback provided by "Doubao" AI agents offers students numerous opportunities to quickly revise and adjust their interpreting expressions. Interpreting practice has shifted from a state where a few students interpret while the majority remain silent to one where all students interpret actively. This shift provides essential technical support for implementing large-scale and high-frequency interpreting training in the current study.

During the feedback process, the "Doubao" AI agents automatically retrieve the embedded reference texts uploaded by the teacher to compare students' interpreting expressions with "standard answers". In areas such as semantic flexibility, pragmatic appropriateness, and cross-cultural adaptability, the agents occasionally have AI illusions or misjudgments. When a student's interpreting is grammatically sound but differs from the reference translation in wording or specific minor details, the agents may still identify it as an "error". Such outcomes can easily trigger self-doubt among students regarding their expressive abilities, diminish their confidence in interpreting output, and even weaken their understanding of the diversity of interpreting expressions. For instance, in a consecutive interpreting task regarding a business contract negotiation, a student translated the phrase " 我们需要进一步核实细节 " (We need to further verify the details) as "We need to double-check the specifics". While the AI agent marked this as a vocabulary mismatch because the embedded reference text used "verify the details", the teacher intervened to clarify that "double-check the specifics" is not only accurate but also highly idiomatic in a practical business environment. This intervention successfully helps the student understand that interpreting is about semantic equivalence rather than word-for-word matching, effectively mitigating the discouragement caused by AI agent's rigid judgment.

The "Doubao" AI agents offer "fast and broad" feedback, such as grammatical corrections and prompts for missing information, whereas the teacher provides "deep and warm" secondary feedback to supplement and clarify students' interpreting expressions, particularly regarding acceptable interpreting version for semantic flexibility and detailed handling of informational fidelity. When the agents misjudge or miss expressive details, the teacher acts as a "safety net" by identifying which expressions are reasonable and acceptable and which require further optimization. This intervention compensates for the shortcomings of AI feedback and alleviates the frustration students experience due to misjudgments. In this process, the feedback system in the interpreting classroom gradually evolves from the traditional model of "teacher-monopolized feedback" to a feedback ecosystem co-constructed through human-AI collaboration. Within this reconstruction, the teacher upgrades their role from "correction arbiter" to "architect of feedback system".

4.2 From "AI User" to "Guide of AI Literacy": Construction of "Scaffolding" for Human-AI Interaction

Constructing an effective feedback ecosystem requires more than just the teacher's oversight; it also demands that students know how to interact with the tools. When using the "Doubao" AI agents to practice interpreting, students often view them as unidirectional practice tools and easily overlook how to engage in effective interactive dialogues with the AI agents. When respond slowly, generate unreadable text, produce overly long answers, or give unexpected replies, students are often at a loss or repeatedly try similar prompts. This not only wastes students' practice time but also disrupts their interpreting training rhythm. Given that students lack sufficient AI literacy, these "technical barrier" affect learners' interpreting training efficiency and learning experience with AI to a certain extent.

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In this context, rather than debugging the agents for students, the teacher provides demonstrations and guidance to help students learn how to ask clear and precise questions to AI, adjust prompts based on AI feedback, and gradually master strategies for effective interaction with the AI agents. For example, when a student initially received an overly long and irrelevant response, the teacher demonstrated how to refine a vague prompt like "Review my interpreting" into a more structured and specific command: "Act as a professional interpreter trainer, evaluate my retelling of the business news based on its logical coherence and use of transitional words, and provide me three specific suggestions for improvement." This targeted guidance equips the learner with necessary "scaffolding" to move beyond surface-level AI agent usage to sophisticated human-AI collaboration, allowing the student to extract more precise and useful feedback from AI agent. Consequently, students transform the "Doubao" agent into their personal interpreting practice companion. Essentially, this process marks the gradual development of students' AI literacy. Furthermore, it fosters learners' ability to collaborate effectively with AI agents.

Under the scaffolding of human-AI interaction, the "Doubao" AI agents efficiently process foundational aspects of students' interpreting output, such as vocabulary, sentence patterns, grammar, and informational fidelity, serving as a low-level "scaffold" in interpreting training. Meanwhile, the teacher focus their efforts on more complex dimensions – such as pragmatic appropriateness, logical coherence, and cross-cultural understanding – acting as a high-level "scaffold" to help students successfully cross the Zone of Proximal Development (ZPD) that remains beyond the reach of AI. Thus, a dual-layered scaffolding system has been established via collaboration between human teachers and AI agents. Students are no longer mere users of AI technology, they evolve into experienced users of AI tools who know how to interact with AI agents while practicing interpreting. Similarly, the teacher transitions from an AI "troubleshooter" into a "guide" for students' AI literacy. This shift promotes "human-AI symbiosis" as a standard practice in interpreting pedagogy.

4.3 From "Error Judge" to "Emotional Supporter": The "Psychological Buffer" in Affective Filtering

Beyond the technical proficiency required for human-AI interaction, the inherent nature of AI feedback presents another significant challenge: the psychological impact on learners. When interacting with the "Doubao" AI agents, students with limited linguistic competence – especially those capable of producing only fragmented words and sentences – frequently encounter the AI agents' "objective" error judgments or reminders for missing information. This "emotionless" feedback subtly increases students' psychological burden and makes them even more anxious when facing interpreting tasks. From the perspective of the Affective Filter Hypothesis, this emotional stress triggered by machine feedback manifests by reduced learning motivation and a declined willingness to practice interpreting. Classroom observations and informal student feedback show that some learners, after repeatedly encountering the AI agents' "emotionless" evaluations without immediate human support, exhibited signs of frustration or even a temporary refusal to engage with the "Doubao" AI agents, viewing them as "harsh critics" rather than helpful tools. Ultimately, this pressure makes the already challenging process of interpreting training more passive.

While patrolling in the classroom, the teacher pays special attention to the "small efforts" shown in students' interpreting output and view them as the starting point for progress. When students make an attempt to speak, even if they only deliver one or two pieces of key information, the teacher actively captures these

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"small wins" and offers encouragement in an empathetic and personalized manner. For instance, the teacher might tell a student, "You got the key points! It would be even better if your tone were a bit more natural and if the sentence were a little longer", or "Try again, your expressions can sound more natural". This warm and empathetic feedback from the teacher effectively lowers the "barrier" of the affective filter and alleviates the psychological pressure stemming from the "Doubao" AI agents' "emotionless" judgments. Consequently, this supportive approach helps students feel comfortable making mistakes in the low-stakes setting of provided by the AI agents, helping them gradually refine their interpreting expressions.

Through this kind of care with "psychological buffering", the teacher's role in the classroom shifts from an "error judge" focusing on language correction to an "emotional supporter" who prioritizes affective care. While the AI agent operates in a strict world of "right and wrong", the interpreting teacher recognizes that a student's confidence, self-efficacy, and learning motivation to interpret are the true foundations for developing interpreting skills. This has been further supported by the in-depth student interviews, where learners explicitly expressed that while the "Doubao" AI agent was an efficient tool for identifying language errors, the teacher's intervention and emotional support remained indispensable for maintaining their confidence and learning motivation. For instance, if a student made a minor error while trying to interpret a highly complex sentence, the AI agent would judge it as incorrect. The teacher, however, would acknowledge the student's courage and effort by offering them praise for trying to interpret such a difficult sentence. Students note that having a teacher who truly understand their struggles and fears keeps them engaged and motivated to perform interpreting tasks. Ultimately, this demonstrates how AI agents' feedback and the teacher's feedback complement each other on both cognitive and affective levels. Together, they create a human-AI collaborative interpreting teaching ecosystem which is filled with emotional support.

5. Conclusion

By examining the integration of the "Doubao" AI agents into the Business English Interpreting course, this study explores the role transformations of the interpreting teacher within human-AI collaborative contexts. As the "Doubao" AI agents provide students with extensive immediate feedback, the interpreting teacher is freed to gradually transition from a traditional "evaluator" to an "architect of feedback system" who oversees and refines AI output; from a mere "AI user" to a "guide of AI Literacy" who scaffolds effective human-AI interaction; and from a strict "error judge" to an "emotional supporter" who alleviates learners' psychological anxiety. Far from a passive shift, this threefold transformation empowers the teacher to proactively elevate their focus from standardized error correction to higher-level, flexible cognitive support and deeply humanistic emotional care.

It is worth noting that this transformation also requires the teacher to take on more complex "meta-feedback" tasks. Specifically, the teacher must review, refine, and supplement the AI agents' output – identifying where the agents' feedback hit the mark and where they fall short – so they can step in and provide direct guidance when necessary. Fundamentally, this dynamic feedback ecosystem highlights the irreplaceability of the interpreting teacher in the human-AI collaborative teaching context while simultaneously placing higher demands on the teacher's AI literacy. However, it is important to acknowledge that this role transformation is not without practical challenges. The responsibility of managing 23 distinct "Doubao" AI agents while performing

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intensive "meta-feedback" tasks significantly increases the teacher's cognitive workload and instructional preparation time. Without proper workflow optimization or institutional support, these new demands could lead to professional burnout. Therefore, future research should explore how to strike a balance in human-AI collaboration to ensure the long-term sustainability of the teacher's new roles.

In essence, the interpreting teacher's role transformation in the era of artificial intelligence underscores not only what the teacher can do, but more importantly, where he should truly focus their efforts. The "Doubao" AI agents are highly effective at delivering "fast, broad, and low-level" cognitive feedback. They can instantly process large amounts of students' interpreting output and evaluate it against pre-set standards. In contrast to AI agents, the teacher excels at offering "deep, warm, and high-level" support. The teacher can make flexible judgments regarding pragmatic appropriateness and cross-cultural understanding. Furthermore, the teacher can provide timely emotional responses and personalized encouragement when students feel anxious or frustrated, helping them maintain their willingness to speak and their motivation to learn. Interpreting pedagogy in the AI era is not about humans and machines competing for dominance in providing feedback. Rather, it is about letting AI maximize instructional efficiency at the cognitive level, while the teacher safeguards human warmth at the affective level. By fulfilling their respective roles, both work together to support the continuous development of students' interpreting abilities.

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