



Teacher-Student Interaction in Online ESL/EFL Classrooms: A Review of Synchronous and Asynchronous Communication

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Abstract. Teacher-student interaction is a critical factor influencing learning engagement, academic performance, and language proficiency in online English as a Second Language (ESL) and English as a Foreign Language (EFL) education. This study examines the characteristics of synchronous and asynchronous interaction, their impact on student outcomes, and their pedagogical implications for online language learning. Using a systematic literature review approach, this study synthesizes findings from recent empirical research on online teacher-student interaction, highlighting key trends, challenges, and instructional strategies. The findings indicate that synchronous interaction enhances real-time engagement, facilitates immediate feedback, and supports oral proficiency development. However, technological barriers and participation anxiety remain significant challenges. While asynchronous interaction offers flexibility and opportunities for deeper reflection, it may reduce spontaneous communication and delay feedback. This study underscores the necessity of a balanced integration of synchronous and asynchronous methods to optimize student engagement and learning effectiveness. The findings have theoretical significance in advancing the understanding of digitally mediated language learning and practical implications for educators in designing interactive and student-centered online learning environments.

Keywords: Online ESL/EFL learning, teacher-student interaction, synchronous interaction, asynchronous interaction, digital pedagogy

1 Introduction

With the rapid advancement of educational technology, online and blended learning have become integral components of second language (L2) education. The COVID-19 pandemic further accelerated this shift, compelling educational institutions worldwide to transition to synchronous and asynchronous online teaching modes [1]. In the field of English as a Second Language (ESL) and English as a Foreign Language (EFL) education, this transformation has created new opportunities for flexible, technology-enhanced learning environments. However, it has also raised concerns regarding the effectiveness of teacher-student interaction in these digital spaces [2].

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Various studies have explored different online teaching models, ranging from fully online asynchronous courses to blended and flipped classroom approaches that integrate face-to-face interactions with digital instruction [3]. Researchers have examined the impact of technology on language acquisition, learner engagement, and teacher instructional strategies [1]. However, the nature of teacher-student interaction in online ESL/EFL classrooms and its impact on learning outcomes remain underexplored. Extensive research in Second Language Acquisition (SLA) has demonstrated that interactive learning environments enhance language proficiency, learner motivation, and cognitive engagement [2]. In traditional face-to-face classrooms, teacher-student interaction plays a central role in scaffolding learning, providing feedback, and facilitating meaningful language practice. In an online learning context, however, interaction is mediated through digital tools such as video conferencing, discussion forums, and chat-based communication, which can alter the dynamics of engagement and instructional effectiveness [3]. Understanding how teacher-student interaction occurs in online settings is essential for ensuring high-quality language instruction. Although various studies have investigated the impact of technology on second language education, there remains a gap in synthesizing findings on teacher-student interaction as a defining characteristic of online ESL/EFL instruction. Given the pedagogical shift toward digital learning environments, it is imperative to systematically review and discuss the interactional features, engagement patterns, and factors influencing teacher-student communication in online ESL/EFL classrooms. This review aims to address the following key aspects:

Interaction Behaviors – How do teachers and students interact in online ESL/EFL classrooms?

Interaction Effects – How does teacher-student interaction impact learning engagement, motivation, and proficiency?

By analyzing relevant empirical studies, case studies, and theoretical frameworks, this review explores the types of interaction, their effects on learning, and the factors influencing teacher-student communication in online ESL/EFL classrooms. It highlights the critical role of teacher-student interaction in shaping online ESL/EFL learning experiences and underscores the need for pedagogical innovations to foster more dynamic, communicative, and student-centered virtual learning environments.

2 Comparison of Synchronous and Asynchronous Interaction

Teacher-student interaction is pivotal in second language acquisition, particularly in online ESL/EFL classrooms, where the absence of physical presence necessitates alternative engagement strategies. Effective interaction fosters language development, cognitive engagement, and learner motivation [2]. However, the dynamics of interaction in online settings differ significantly from those in traditional face-to-face classrooms due to the reliance on digital tools and virtual communication. This section examines synchronous and asynchronous teacher-student interaction in online ESL/EFL classrooms,

analyzing their distinct functions, advantages, and challenges to better understand their impact on student engagement and language learning outcomes.

Online teacher-student interaction occurs through synchronous and asynchronous communication, each serving distinct pedagogical functions. Synchronous interaction refers to real-time communication that enables immediate engagement between teachers and students through video conferencing platforms such as Zoom, Microsoft Teams, Tencent Meeting, and Google Meet. Common forms of synchronous interaction include live video discussions, where teachers pose questions and engage students in structured dialogues, breakout rooms, which facilitate small-group collaboration and task-based learning, and real-time polling and quizzes, which help assess student comprehension during lessons [4] [5]. In contrast, asynchronous interaction occurs through delayed communication methods that allow students to engage with course materials and respond to tasks at their own pace. Examples of asynchronous interaction include discussion forums, where students respond to teacher prompts and interact with peers through written exchanges, pre-recorded lectures, which enable students to revisit instructional content as needed, and assignment-based feedback, where teachers provide written comments or voice-recorded feedback on student submissions [3] [6] [7]. The effectiveness of these interaction modes depends on factors such as the learning platform, course design, and teacher facilitation strategies [2].

One key advantage of synchronous interaction is the provision of immediate feedback, which allows students to clarify doubts, correct errors, and receive real-time support from teachers, thereby enhancing their comprehension and language skills [3]. The dynamic nature of synchronous engagement also fosters motivation and encourages active participation, as students can interact spontaneously with peers and instructors, simulating traditional classroom interactions [8]. However, synchronous interaction is highly dependent on technology, making it vulnerable to issues such as poor internet connectivity, audio-visual lags, and platform limitations, all of which can disrupt communication and hinder learning [2]. Additionally, some students experience participation anxiety, particularly in video-based sessions, leading to reduced verbal engagement [3] [5].

In contrast, asynchronous interaction provides greater flexibility and accessibility, allowing students to engage with course materials according to their individual schedules. This format is particularly beneficial for learners across different time zones, with varying learning paces, or with external commitments, making online education more inclusive [4]. Moreover, asynchronous communication promotes reflective learning, as students have more time to process information, compose thoughtful responses, and review feedback at their own pace [6]. Teachers can also provide more detailed and comprehensive feedback in written or recorded formats, allowing students to revisit and apply corrections effectively [9]. However, the lack of immediacy in asynchronous interaction can slow down the feedback process, potentially leading to misunderstandings or delayed comprehension [3]. Furthermore, the absence of spontaneous communication may reduce opportunities for real-time conversational practice, making it more challenging to develop oral fluency [5].

3 Teacher-Student Interaction Behaviors

Teacher-student interaction in online ESL/EFL classrooms involves specific communicative behaviors, including questioning, feedback, and non-verbal communication. These behaviors significantly influence student engagement, learning motivation, and language proficiency development [2] [10].

3.1 Questioning and Response Patterns

Effective questioning strategies are essential for engaging students in online discussions, promoting critical thinking, and encouraging active language use. Questioning patterns in online classrooms vary depending on the interaction mode. In online ESL/EFL classrooms, teachers employ various questioning techniques to assess comprehension, stimulate critical thinking, and encourage student engagement. These techniques can be categorized into closed-ended vs. open-ended questions, oral vs. written responses, and participation encouragement strategies.

Closed-ended questions are commonly used to evaluate students' understanding of specific content. These questions typically take the form of multiple-choice, true/false, or short-answer formats, allowing teachers to quickly assess comprehension levels [1]. Conversely, open-ended questions are designed to promote higher-order thinking and extended responses, encouraging students to analyze concepts, provide detailed explanations, and express their perspectives. This type of questioning is particularly beneficial for developing critical thinking skills and language fluency [1].

The mode of student responses varies depending on whether the interaction is synchronous or asynchronous. During synchronous sessions, such as live video discussions or virtual classroom meetings, students typically respond orally or via chat in real time. This allows for immediate feedback and spontaneous dialogue, simulating the dynamics of traditional classroom interaction [3]. In contrast, asynchronous interactions rely on written responses submitted through online platforms such as discussion forums, email, or learning management systems. This format provides students with more time to reflect, organize their thoughts, and construct well-articulated responses [3].

In online learning environments, teachers employ unique strategies to enhance student participation and foster an inclusive atmosphere. One key method is randomized cold calling, which, unlike traditional in-person cold calling, can be automated using digital tools to ensure a fair and unbiased selection process. This technique encourages equal participation, holding all students accountable without the subjectivity present in face-to-face classrooms [8]. Additionally, online platforms offer structured breakout room discussions, allowing students to engage in small-group collaboration before sharing their ideas with the larger class. Studies have shown that students participating in breakout rooms demonstrate higher engagement levels and better comprehension, as they have more opportunities to articulate their thoughts in smaller peer groups before contributing to whole-class discussions [4].

Furthermore, teachers can utilize interactive polling and real-time chat functions to collect student responses efficiently, ensuring that all voices are heard [5]. These tools allow for immediate participation, even from students who may be hesitant to speak

aloud, thereby creating a more inclusive learning environment. Research indicates that integrating real-time interaction tools in online classrooms significantly improves student engagement and response rates compared to traditional discussion formats [3]. By leveraging these digital tools, online classrooms can create interactive and engaging learning experiences that effectively support student participation and collaboration. This demonstrates that well-structured virtual environments can be as interactive and effective as traditional face-to-face settings.

3.2 Feedback and Evaluation Behavior

Feedback plays a critical role in language learning, shaping students' linguistic accuracy, confidence, and self-regulation skills. In online learning environments, feedback delivery varies depending on whether it is provided synchronously or asynchronously.

Synchronous feedback occurs during real-time interactions in live sessions, such as video conferences or virtual classroom discussions. This type of feedback is immediate, allowing teachers to address errors as they occur and helping students adjust their language use in real time [2]. For instance, during a live speaking activity, a teacher might correct pronunciation errors on the spot or provide instant praise for accurate responses, reinforcing correct language use. In contrast, asynchronous feedback is provided after the learning activity, typically in the form of written comments or recorded audio/video feedback on assignments. This approach allows teachers to offer more detailed and comprehensive feedback, addressing not only errors but also the overall structure, coherence, and content of students' work. For example, when reviewing a written essay, a teacher might highlight grammar mistakes, suggest vocabulary improvements, and provide comments on organization and argumentation. The asynchronous format gives students time to carefully review and reflect on the feedback, promoting self-regulated learning and long-term improvement [3]. A well-balanced feedback approach that combines real-time correction with structured written feedback has been shown to enhance student learning outcomes in online ESL/EFL instruction [9].

3.3 Non-Verbal Communication in Online vs. Face-to-Face Learning

Non-verbal cues, such as eye contact, facial expressions, and gestures, are integral to effective teacher-student interaction. However, in online learning environments, these cues are often absent or diminished due to variations in camera usage and the lack of physical signals, impacting communication quality [11]. This, in turn, affects classroom engagement and comprehension.

In traditional classrooms, teachers rely on eye contact and physical presence to gauge students' understanding and maintain engagement. Eye contact helps establish a sense of connection and encourages students to stay focused, while physical proximity allows teachers to observe non-verbal cues such as facial expressions and body language, which indicate comprehension or confusion. However, in online settings, many students choose to turn off their cameras, limiting visual engagement and reducing the teacher's ability to assess student reactions in real time. This lack of visual feedback can create a sense of disconnection, making it more challenging for teachers to adjust

their instructional approach to meet students' needs [8]. Similarly, gestures and body language are essential tools for conveying meaning and reinforcing language concepts in face-to-face instruction. Teachers often use hand gestures, pointing, and facial expressions to emphasize key points, illustrate abstract ideas, and provide contextual clues that support language comprehension. In online classrooms, these physical cues are either limited or entirely absent, requiring teachers to adapt their communication methods. To compensate, teachers use digital tools such as cursor movements, digital annotations on shared screens, and visual markers to highlight important information. Additionally, emoji reactions and chat-based responses help convey emotions and engagement, partially replacing the non-verbal feedback typically observed in traditional settings [1].

The absence of non-verbal cues in online settings poses challenges for both teachers and students. However, teachers can compensate by using vocal variations, interactive slides, and real-time engagement strategies to maintain student interest [9]. Although online learning platforms offer alternative methods for maintaining engagement, the lack of direct eye contact and physical gestures can reduce the immediacy and richness of communication. Therefore, effective online teaching requires deliberate strategies to enhance visual engagement and compensate for digital interaction limitations, ensuring that students remain attentive and actively involved in the learning process.

3.4 Interaction Behaviors in Online Classrooms

Building on the previous analysis, we have identified the key aspects of teacher-student interaction in online ESL/EFL classrooms: questioning and response patterns, feedback and evaluation behavior, and non-verbal communication. The table below (Table 1) presents a structured comparison of these interaction behaviors, outlining their characteristics, advantages, and challenges in synchronous and asynchronous learning environments.

Table 1. Comparison of Synynchronous Interaction and Asynchronous Interaction

Aspect		Synchronous Interaction (Real-Time Communication)	Asynchronous Interaction (Delayed Communication)
Questioning and Response Patterns	Behaviors	Live discussions, Breakout rooms, Real-time quizzes, Cold calling, Immediate prompting	Written discussion forums, Email responses, Assignment-based reflections
	Advantages	Immediate feedback enhances engagement, Encourages spontaneous participation, Simulates real-time classroom interactions	Flexibility in response time, Supports deeper reflection, Allows students to refine answers before responding
	Challenges	Participation anxiety, Dependence on stable internet, Limited opportunities for self-paced reflection	Delayed feedback can slow learning progress, Reduced spontaneous discussion, Requires student self-discipline

Feedback and Evaluation Behavior	Behaviors	Instant verbal correction, Scaffolding during discussions, Immediate polls and quizzes	Written assignment comments, Recorded video/audio feedback, Peer review forums
	Advantages	Real-time correction supports immediate learning adjustments, More engaging for speaking practice	Allows for detailed feedback, Enables students to review and revise their work multiple times
	Challenges	Requires active participation, Can be intimidating for hesitant students, Heavily dependent on internet stability	No immediate clarification, Possible misinterpretation of feedback, Less opportunity for interactive discussion
Non-Verbal Cues	Behaviors	Eye contact (if cameras are on), Gestures, Facial expressions, Tone of voice	Cursor movements, Digital annotations, Emoji reactions, Chat-based responses
	Advantages	Reinforces engagement, Adds emotional and contextual meaning to interaction, Supports comprehension	Allows alternative expression methods, Encourages participation from students hesitant to speak
	Challenges	Limited non-verbal cues when cameras are off, Increased reliance on vocal cues, Can feel impersonal in online settings	Absence of direct emotional expression, Possible misinterpretation of tone, Requires structured interaction design

4 Effects of Teacher-Student Interaction Online

This section examines both the objective and subjective effects of teacher-student interaction in online ESL/EFL classrooms. Objective effects refer to measurable outcomes such as academic performance and language proficiency, while subjective effects encompass motivation, satisfaction, and learning strategies.

4.1 Objective Effects

Teacher-student interaction in online ESL/EFL classrooms significantly influences learning engagement, academic achievement, and language proficiency. Compared to traditional classrooms, online environments offer both unique opportunities and challenges that shape these outcomes.

Active participation and cognitive involvement are essential for effective learning. In synchronous settings, real-time interaction—such as live discussions and virtual breakout rooms—fosters immediate engagement, closely simulating face-to-face communication while offering greater accessibility [4] [8]. A study of 398 college students found a significant positive correlation between teacher-student interaction and learning outcomes ($r = 0.649$, $p < 0.01$), highlighting the role of interactive engagement in

academic success [12]. Digital tools such as interactive polls, live chat, and collaborative whiteboards further enhance engagement by promoting spontaneous participation. However, technical issues and communication delays can disrupt the flow of interaction and reduce the immediacy of feedback. In asynchronous learning, discussion forums and recorded lectures provide students with flexibility, allowing them to engage with course content at their own pace [3]. This format supports deeper cognitive engagement, encouraging thoughtful responses and critical analysis. However, the lack of immediate teacher and peer presence requires students to be more proactive in maintaining engagement, as external motivation may be lower. Research indicates that students in asynchronous settings often exhibit reduced participation due to the absence of real-time interaction [4].

Teacher-student interaction also plays a crucial role in improving oral and written language skills. Synchronous learning enhances speaking and listening skills through real-time verbal exchanges, with immediate feedback aiding pronunciation, fluency, and comprehension [5]. A study comparing synchronous and asynchronous e-language learning found that 82% of participants favored synchronous interaction, citing its effectiveness in developing oral proficiency [13]. Additionally, features such as automatic transcription and session recordings enable students to review their spoken interactions for self-improvement. Asynchronous feedback, delivered through written comments or recorded audio/video messages, is particularly effective in online environments, where students can revisit feedback multiple times to reinforce learning [9]. This mode of feedback is often more detailed than in traditional settings, as teachers can provide comprehensive comments on grammar, vocabulary, and structure without the time constraints of live interaction [3]. A study by Garrison and Vaughan demonstrated that students who received detailed asynchronous feedback performed 20% better in writing proficiency assessments compared to those who only received real-time corrections [6]. Additionally, the asynchronous nature of online feedback encourages students to take greater ownership of their learning, as they must independently apply feedback to revise their work. This process not only improves writing and reading proficiency but also enhances self-regulation and critical thinking skills.

The online learning environment also promotes essential self-regulation, time management, and digital literacy skills, which are crucial in modern education. Asynchronous learning, in particular, requires students to manage their study schedules, set goals, and track progress independently [6]. This autonomy cultivates responsibility and independence—skills increasingly valued in both academic and professional settings. Collaborative tasks, such as group projects and peer reviews, further enhance problem-solving and communication skills [2]. Unlike traditional in-person collaboration, online group work often involves cross-time-zone coordination and digital resource sharing, preparing students for remote work environments. Studies indicate that students engaged in online collaborative activities improve problem-solving skills by 30% compared to those in individual-based learning settings [8].

4.2 Subjective Effects

Teacher-student interaction in online ESL/EFL classrooms significantly influences motivation, satisfaction, and learning strategies, albeit in ways distinct from traditional face-to-face settings. The absence of physical presence and the reliance on digital communication present both challenges and opportunities that shape students' emotional engagement and learning behaviors.

Motivation, Both intrinsic and extrinsic motivation play vital roles in sustaining student engagement in online learning. Intrinsic motivation is fostered by interactive tasks such as live discussions, collaborative projects, and multimedia-enhanced activities, which make learning more dynamic and engaging [10]. Asynchronous platforms also support intrinsic motivation by allowing students to engage at their own pace, promoting autonomy and self-directed learning. However, the lack of physical presence can diminish motivation, particularly in asynchronous settings, where students may experience feelings of isolation [3]. Extrinsic motivation in online learning is primarily influenced by timely feedback and performance recognition. Online platforms enable teachers to provide more detailed and personalized feedback, both synchronously during live sessions and asynchronously through written comments or recorded messages. This reinforcement strengthens students' sense of achievement, encouraging continued effort and participation [8].

Student satisfaction in online learning is closely linked to the quality and frequency of teacher-student interaction. Personalized feedback and engaging instructional methods contribute to higher satisfaction levels by making students feel supported and actively involved in the learning process [5]. Additionally, the flexibility of asynchronous interaction allows students to manage their time effectively, reducing stress and enhancing their sense of control. However, challenges such as technical issues, limited non-verbal cues, and reduced spontaneous communication can negatively impact engagement. The lack of real-time interaction in asynchronous settings may lead to feelings of isolation and lower participation rates [4]. To mitigate these challenges, teachers can promote peer interaction, incorporate interactive digital tools, and maintain clear, responsive communication to create a more connected learning environment.

Teacher-student interaction also shapes students' learning strategies, influencing how they engage with and retain information. Asynchronous learning encourages cognitive strategies such as note-taking and summarization, allowing students to process and review materials at their own pace [6]. In contrast, synchronous interaction supports social strategies, including collaborative discussions and peer feedback, which enhance communication skills and foster a sense of classroom community [2]. Furthermore, asynchronous feedback plays a key role in developing metacognitive strategies, such as goal-setting, self-monitoring, and reflection. By encouraging students to actively engage with feedback and track their progress, asynchronous interaction promotes greater self-regulation and independent learning [9].

5 Conclusion

This study examined the impact of teacher-student interaction in online ESL/EFL classrooms, with a focus on synchronous and asynchronous communication. The findings indicate that synchronous interaction fosters immediate feedback, real-time engagement, and oral fluency, while asynchronous interaction supports self-regulated learning, critical reflection, and writing proficiency. However, both approaches present challenges: technical constraints and participation anxiety can hinder synchronous engagement, whereas delayed feedback and reduced immediacy may limit the effectiveness of asynchronous learning.

From a pedagogical perspective, instructors should adopt a strategic blend of synchronous and asynchronous activities to optimize learning outcomes. Implementing structured feedback mechanisms, facilitating interactive discussion forums, and encouraging multimodal engagement (e.g., video responses, peer collaboration) can help overcome participation barriers and sustain learner motivation. Additionally, addressing technical accessibility issues and fostering student autonomy in asynchronous learning environments will further enhance instructional effectiveness. By refining online interaction strategies, educators can create more dynamic, inclusive, and effective virtual learning environments, ultimately supporting language acquisition and academic success.

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