

The EFL Students' Interaction Patterns in Online Learning Platforms: A Qualitative Observational Study

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ABSTRACT

This study explores EFL students' interaction patterns in online learning platforms through a qualitative observational approach. Grounded in Moore's interaction framework, the research focuses on three types of interaction: learner–teacher, learner–learner, and learner–content interaction. The study was conducted in an undergraduate online course involving 27 EFL students who participated in synchronous sessions supported by a learning management system. Data were collected through participant observation across five online meetings, supported by field notes, chat transcripts, and LMS discussion records. Thematic analysis was employed to identify recurring interaction behaviors and patterns. The findings reveal that learner–teacher interaction was the most dominant form, characterized by students' responses to instructors' questions and feedback. Learner–learner interaction occurred less frequently and was often limited to brief peer responses, while learner–content interaction varied depending on task requirements. These results indicate that although interaction is present in online learning environments, it is uneven and largely teacher-driven. The study highlights the importance of intentional instructional design and active facilitation to promote balanced interaction and meaningful engagement in online EFL learning contexts.

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1. INTRODUCTION

Over the past two decades, rapid advancements in digital technology have profoundly reshaped the landscape of higher education. The integration of internet-based platforms into teaching and learning processes has enabled institutions to extend educational access beyond traditional classrooms. Online learning platforms, including video conferencing tools and learning management systems (LMS), now play a central role in facilitating instruction, communication, and assessment. These platforms allow learning activities to take place regardless of time and location, offering flexibility that is particularly valuable in contemporary educational contexts. As online learning continues to expand, research attention has increasingly shifted from issues of access and technology to the quality of learning experiences occurring within online environments.

A key factor influencing the quality and effectiveness of online learning is interaction. Educational research over the last twenty years has consistently highlighted interaction as a fundamental component of meaningful learning experiences. Moore's interaction framework emphasizes the importance of learner–teacher, learner–learner, and learner–content interactions in distance and online education. These forms of interaction support clarification of concepts, social presence, collaboration, and cognitive engagement. In well-designed online courses, interaction enables students to actively construct knowledge rather than passively receive information.

Numerous studies have demonstrated that active interaction in online learning environments is closely related to student engagement, motivation, and academic success. Hrastinski (2008) argued that participation in online activities reflects students' level of engagement and significantly influences learning outcomes. Similarly, Salmon (2013) emphasized that effective facilitation of online interaction encourages students to contribute ideas, ask questions, and collaborate with peers. Observable interaction behaviors in online classrooms may include verbal participation during synchronous sessions, written responses in chat or discussion forums, timely reactions to instructors' prompts, and engagement with digital learning materials.

Despite its acknowledged importance, research has also revealed that interaction in online learning contexts is often limited or uneven. Many students tend to remain silent during live sessions, turn off their cameras, or participate minimally through text-based communication. Such interaction patterns may be influenced by various factors, including course design, instructional strategies, technological familiarity, and students' confidence in expressing themselves in virtual environments. Limited interaction can reduce students' sense of presence and belonging, potentially leading to disengagement and less effective learning experiences.

To gain a deeper understanding of how interaction unfolds in online learning environments, it is necessary to examine students' actual behaviors during learning activities. Previous research has frequently relied on surveys and interviews to explore students' perceptions of online interaction. While these methods provide valuable insights, they may not fully capture authentic interaction as it occurs in real time. Qualitative observation offers a complementary approach by allowing researchers to directly examine naturally occurring behaviors within online classrooms. According to Creswell (2014), observation enables the study of social interaction in natural settings, providing rich insights into participants' actions and responses.

Therefore, this study focuses on exploring students' interaction patterns in online learning platforms through qualitative observation. By examining observable behaviors related to learner–teacher, learner–learner, and learner–content interactions, this research aims to contribute to the growing body of literature on online learning interaction over the past two decades. The findings are expected to provide practical insights for educators and institutions seeking to enhance interaction and improve the overall quality of online teaching and learning practices.

2. LITERATURE REVIEW

Online learning has become an essential mode of instruction in higher education due to advancements in digital technology and increased access to internet-based platforms. Online learning platforms such as Zoom, Google Meet, and Learning Management Systems (LMS) enable teachers and students to engage in teaching and learning activities without physical presence. Although online learning offers flexibility and accessibility, its effectiveness largely depends on the quality of interaction that occurs during the learning process. Interaction is considered a key factor in supporting student engagement, motivation, and learning outcomes in online environments.

Interaction in online learning has been widely discussed in educational research. Moore (1989) introduced three fundamental types of interaction in distance education: learner–teacher interaction, learner–learner interaction, and learner–content interaction. Learner–teacher interaction involves feedback, explanations, and guidance provided by instructors, while learner–learner interaction refers to communication and collaboration among students. Learner–content interaction focuses on students' engagement with learning materials. These types of interaction are essential for creating meaningful learning experiences in online settings.

Several studies have highlighted the importance of active interaction in online learning. Hrastinski (2008) argued that student participation is closely related to engagement and learning success in online environments. Students who actively participate by asking questions, responding to discussions, or interacting with peers tend to demonstrate higher levels of motivation and satisfaction. Conversely, limited interaction may result in passive learning, reduced attention, and lower academic achievement. In online classes, interaction is often reflected through observable behaviors such as verbal participation, chat responses, camera usage, and responsiveness to teachers' instructions.

Despite its importance, research has shown that student interaction in online learning environments is often limited. Many students choose to remain silent, turn off their cameras, or participate minimally through chat features. These interaction patterns may be influenced by various factors, including learning design, teaching strategies, and students' confidence in online communication. Therefore, examining students' interaction patterns is necessary to better understand how online learning environments function in practice.

Previous studies on online interaction have commonly employed surveys and interviews to explore students' perceptions and experiences. While these methods provide valuable insights, they rely heavily on self-reported data, which may not always represent actual classroom behavior. Qualitative observation offers an alternative approach by allowing researchers to directly examine students' real interactions during learning

activities. According to Creswell (2014), observation enables researchers to study behaviors in natural settings and gain a deeper understanding of social interactions.

Patton (2015) emphasized that observation is particularly suitable for studying interaction patterns because it captures authentic behaviors as they occur. In online learning research, observation allows researchers to examine how students interact with teachers, peers, and learning content through digital platforms. Additionally, Miles, Huberman, and Saldaña (2014) suggested that systematic observation combined with qualitative analysis can provide rich and meaningful data.

Based on previous literature, qualitative observation is considered an appropriate method for exploring students' interaction patterns in online learning platforms. By focusing on observable behaviors, this study aims to contribute to existing research on online learning interaction and provide insights that may support the improvement of online teaching practices.

3. METHOD

This study employed a qualitative research approach using participant observation to explore students' interaction patterns in online learning platforms. The methodological design was intentionally aligned with the research objectives outlined in the Introduction and supported by theoretical and empirical insights discussed in the Literature Review, particularly Moore's interaction framework and prior studies emphasizing the importance of authentic interaction in online learning environments.

The research was conducted in an undergraduate online course delivered synchronously through a video-conferencing platform such as Zoom or Google Meet and supported by a Learning Management System (LMS). The course was part of a regular instructional program in a higher education institution and was not specifically designed for research purposes. This naturalistic setting allowed interaction to occur organically, reflecting authentic online learning practices.

Participants consisted of 27 (EFL) students who were actively engaged in online learning throughout the observed period. All students participated in synchronous online sessions that included live lectures, question-and-answer activities, chat-based discussions, and engagement with shared digital learning materials. Purposive sampling was applied to select this class because it consistently implemented interactive online learning activities relevant to the focus of the study.

In addition to the student participants, the researcher also acted as a participant-observer by joining the online classes as part of the learning environment. While participating in the sessions, the researcher primarily assumed an observational role to capture interaction dynamics as they naturally occurred. This participant observation approach enabled a deeper contextual understanding of online interaction, including verbal communication, chat exchanges, and students' engagement with learning content in real time.

Data collection was carried out through participant observation across five online learning sessions. During each session, the researcher systematically observed interaction without leading or directing classroom activities. Observation was guided by three types of interaction adapted from Moore's interaction framework: learner–teacher interaction, learner–learner interaction, and learner–content interaction. Learner–teacher interaction was identified through students' responses to instructors' questions, requests for clarification, and reactions to feedback. Learner–learner interaction was observed in peer discussions, agreement or disagreement with classmates' ideas, and collaborative exchanges via audio or chat features. Learner–content interaction was evident through students' engagement with digital materials such as presentation slides, videos, shared documents, and LMS-based tasks.

Multiple data sources were used to enhance data richness and credibility, including detailed field notes taken during each observation session, chat transcripts from synchronous online meetings, and relevant excerpts from LMS discussion forums. After each of the five observation sessions, interaction events were documented in structured observational logs to ensure data accuracy and completeness.

To strengthen data validity and demonstrate authentic interaction patterns, observational evidence from online classroom communication was incorporated into the analysis. For instance, students frequently responded to instructor questions through the chat feature by defining concepts or providing brief explanations. Learner–learner interaction was observed when students replied to peers' comments by agreeing, elaborating on ideas, or offering alternative perspectives. Learner–content interaction was apparent when students annotated shared documents, highlighted key points in presentation slides, or completed LMS-based tasks while instructional explanations were delivered. These observations reflect naturally occurring interaction behaviors in online learning settings.

Data analysis followed thematic analysis procedures. All observational notes, chat transcripts, and discussion forum excerpts were transcribed and analyzed iteratively. Initial coding focused on identifying recurring interaction behaviors such as questioning, responding, agreeing, elaborating, and limited participation. These codes were subsequently grouped into broader themes representing patterns of learner–teacher, learner–

learner, and learner–content interaction. The iterative analytical process allowed themes to be refined as patterns became more evident across observation sessions.

Several strategies were employed to ensure the trustworthiness of the findings. Credibility was enhanced through data triangulation across multiple data sources and the inclusion of direct interaction evidence. Dependability was supported by consistent observation procedures across all five sessions. Confirmability was addressed through reflective notes to minimize researcher bias, while detailed descriptions of the research context and participants were provided to support transferability to similar online learning environments.

Ethical considerations were addressed throughout the research process. Participants were informed that online classroom interactions might be observed for research purposes. All data were anonymized, and reported excerpts did not include identifying information related to individuals, courses, or institutions.

4. RESULTS AND DISCUSSION

This study aimed to explore students' interaction patterns in online learning platforms through qualitative observation. The findings indicate that students' interaction in online classes occurred in different forms, including learner–teacher interaction, learner–learner interaction, and learner–content interaction. However, the level and quality of these interactions varied across students and learning sessions.

Learner–teacher interaction was the most visible form of interaction observed during online learning sessions. Students tended to respond to teachers' questions, instructions, and feedback more frequently than interacting with peers. This finding supports previous studies which suggest that teacher presence plays a crucial role in encouraging participation in online learning environments (Salmon, 2013; Martin & Bolliger, 2018). When instructors actively asked questions and invited responses, students were more likely to participate, either verbally or through chat features. This indicates that structured teacher guidance is important in promoting interaction in online classes.

Learner–learner interaction was observed less frequently compared to learner–teacher interaction. Although some students participated in peer discussions and responded to classmates' comments, many students remained passive during collaborative activities. This finding is consistent with earlier research showing that peer interaction in online learning is often limited due to factors such as lack of confidence, limited opportunities for collaboration, or unfamiliarity with online communication (Hrastinski, 2008). The limited peer interaction observed in this study suggests that online learning environments may require more structured collaborative tasks to encourage student-to-student communication.

Learner–content interaction was mainly reflected through students' engagement with learning materials and assigned tasks. Students who actively referred to learning materials, completed tasks on time, and responded to content-related questions demonstrated higher engagement levels. This finding aligns with Moore's (1989) interaction framework, which emphasizes that interaction with content is a key element of meaningful learning. However, the observation also revealed that some students interacted with the content only when required, indicating a surface level of engagement rather than deep learning.

Overall, the findings suggest that student interaction in online learning platforms is present but uneven. While teacher-led interaction was relatively strong, peer interaction and sustained engagement with content were more limited. This supports previous literature which argues that interaction in online learning does not automatically occur and must be intentionally designed and facilitated (Anderson, 2008; Salmon, 2013). Without clear guidance and interactive activities, students may adopt passive roles during online classes.

The results of this study highlight the importance of instructional strategies that promote balanced interaction. Instructors are encouraged to create opportunities for peer collaboration, provide clear interaction guidelines, and actively facilitate discussions. By doing so, online learning platforms can better support meaningful interaction and student engagement, which are essential for effective learning experiences.

5. CONCLUSION

This study set out to explore EFL students' interaction patterns in online learning platforms through qualitative observation, as outlined in the Introduction. The findings demonstrate that interaction in online classes does occur but remains uneven across different interaction types. Learner–teacher interaction emerged as the most prominent pattern, indicating the central role of instructor presence and facilitation in encouraging student participation. In contrast, learner–learner interaction was relatively limited, suggesting that peer communication does not naturally develop without structured collaborative activities. Learner–content interaction varied among students and was often influenced by task demands rather than intrinsic engagement.

These results align with previous research emphasizing that effective interaction in online learning must be intentionally designed and actively facilitated. The study confirms that online learning environments alone do not guarantee meaningful interaction; instead, instructional strategies, task design, and facilitation practices play a crucial role.

Future research may extend this study by involving multiple courses, longer observation periods, or mixed-method approaches to examine factors influencing interaction more deeply. Practically, the findings suggest that educators should incorporate structured peer activities and interactive content to foster more balanced interaction patterns and enhance the quality of online EFL learning experiences.

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