



## Zooming into Engagement: Exploring Cognitive, Behavioral, and Emotional Dynamics in EFL Writing Classes

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### ABSTRACT

The transition to online learning during the COVID-19 pandemic brought significant challenges to maintaining student engagement, particularly in video conferencing-based EFL writing classes. While prior research has highlighted the potential of platforms like Zoom for synchronous learning, studies focusing on the dimensions of cognitive, behavioral, and emotional engagement in writing courses remain limited. This study aims to measure the levels of student engagement in video conferencing-based EFL writing classes and identify strategies to enhance engagement across these dimensions. Employing a mixed-method approach, the study involved 40 English Education undergraduate students at UIN Raden Intan Lampung, selected through purposive sampling. Quantitative data were collected using a questionnaire with 30 items measuring engagement dimensions, distributed via Google Forms. Qualitative data were obtained from semi-structured face-to-face interviews with 10 purposively selected participants. The questionnaire data were analyzed using SPSS for descriptive and inferential statistics, while thematic analysis was applied to the interview transcripts. The findings reveal high levels of cognitive engagement, with students actively participating in writing tasks facilitated by Zoom's interactive features. However, behavioral engagement was moderate due to external challenges like connectivity issues and environmental distractions. Emotional engagement ranged from moderate to high, with students appreciating the platform's flexibility but occasionally experiencing feelings of isolation. The study highlights the need for integrating gamification, structured feedback, and hybrid learning models to address these challenges.

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### INTRODUCTION

The shift to online learning during the COVID-19 pandemic brought unprecedented changes to education, requiring innovative methods to maintain the quality of teaching and learning. Video conferencing platforms, such as Zoom, quickly

became essential tools for synchronous instruction in various educational settings, including English as a Foreign Language (EFL) classes. These platforms offered unique opportunities for real-time interaction, collaboration, and accessibility in teaching and learning processes. Aini et al. (2021) highlighted that platforms like Zoom provided flexibility and convenience for both teachers and students during the pandemic. Similarly, Alfadda and Mahdi (2021) emphasized the importance of user-friendly features in Zoom that facilitated smoother adoption in language courses. However, while video conferencing technology enabled the continuity of education, it also posed challenges, particularly in sustaining student engagement during online learning sessions.

Student engagement, defined as the active involvement of learners in academic activities, is critical to the success of online education. It encompasses three main dimensions: cognitive, behavioral, and emotional engagement (Oktarin et al., 2024). Cognitive engagement refers to the intellectual effort students invest in learning tasks, such as participating in discussions or solving problems. Behavioral engagement involves observable actions like attending classes and completing assignments, while emotional engagement relates to the sense of connection and motivation students feel in their learning environment (Al-Obaydi et al., 2023). The degree of engagement students demonstrate directly impacts their learning outcomes and overall academic success. In video conferencing-based EFL classes, engagement becomes even more significant due to the potential for distractions, technological issues, and the absence of physical presence, which often contributes to accountability and focus.

Previous studies have explored the effectiveness of Zoom in EFL learning environments, shedding light on its advantages and limitations. Hastomo (2021) found that Zoom's features, such as breakout rooms and screen sharing, were instrumental in promoting collaboration and interaction in EFL classrooms. Similarly, Maekawa (2021) noted that interactive elements, such as live discussions and group activities, contributed to increased student participation in university-level Zoom English classes. Despite these advantages, researchers like Chamran et al. (2021) pointed out that students often face difficulties with technological access, platform fatigue, and reduced motivation, which hinder their engagement during online learning. These challenges emphasize the need to investigate how video conferencing platforms can effectively support student engagement in specific EFL contexts, such as writing classes.

Writing classes in EFL settings require a unique focus on creativity, critical thinking, and collaboration. These classes often involve drafting, peer review, and teacher feedback, all of which demand high levels of cognitive and emotional engagement. While platforms like Zoom facilitate these processes through features such as file sharing and breakout discussions, they also pose challenges, particularly for students who may struggle with maintaining focus or motivation in an online environment (Hastomo & Septiyana, 2022). Understanding how students engage

cognitively, behaviorally, and emotionally during video conferencing-based writing instruction is essential for designing effective teaching strategies and leveraging technology to improve learning outcomes.

Despite the growing body of research on video conferencing in EFL education, there is a notable gap in studies examining student engagement specifically in writing classes. Most existing studies have focused on general aspects of online learning or other language skills, such as speaking and listening (Aini et al., 2021; Suadi, 2021). Research that measures the level of engagement in writing classes is scarce, particularly in terms of identifying which dimensions of engagement are most influenced by video conferencing platforms like Zoom. Addressing this gap is crucial, as writing is a fundamental skill in language learning that requires active participation, critical analysis, and emotional investment.

Therefore, the aim of this study is to measure the level of student engagement in video conferencing during EFL writing classes. Specifically, the research seeks to assess cognitive engagement, such as participation in writing tasks and discussions; behavioral engagement, such as attendance and task completion; and emotional engagement, such as students' motivation and sense of connection to the class. By focusing on these dimensions, the study intends to provide insights into the effectiveness of video conferencing in promoting student engagement and identify strategies to enhance the learning experience in online writing instruction. This research is expected to contribute to the existing literature on online education by offering a deeper understanding of how technology can support student engagement in the context of EFL writing classes.

## **METHOD**

### **Research Design**

This study adopts a mixed-method approach (Ivankova et al., 2006), combining both quantitative and qualitative methodologies to provide a comprehensive understanding of students' engagement in video conferencing during EFL writing classes. The mixed-method design enables the researcher to first quantify the level of engagement through a structured questionnaire and then explore the deeper, nuanced experiences of students through interviews. By integrating these methods, the study aims to validate and expand upon the findings, offering both statistical generalization and contextual insights. This design is particularly suitable for addressing complex phenomena like engagement, which involves cognitive, behavioral, and emotional dimensions (Shah & Barkas, 2018). The sequential explanatory model is used, where quantitative data is collected and analyzed first, followed by qualitative data to interpret and elaborate on the initial findings.

## **Participants**

The participants of this study are undergraduate students majoring in English Education at UIN Raden Intan Lampung. A total of 40 students were selected using purposive sampling. This sampling technique ensures that participants possess relevant experience with video conferencing-based EFL writing classes, making them suitable for this study. The participants consist of students enrolled in writing courses that utilize Zoom as the primary instructional platform. Among the 40 participants who completed the questionnaire, 10 students were purposefully chosen for in-depth interviews based on their engagement levels (high, moderate, and low) as indicated by the quantitative results. This purposive selection ensures diversity in perspectives and provides a richer understanding of student engagement.

## **Instruments**

Two primary instruments were utilized in this study to gather data: a questionnaire and an interview guide. The questionnaire was designed to measure students' engagement levels across cognitive, behavioral, and emotional dimensions within video conferencing-based writing classes. Consisting of 30 items, the questionnaire was divided into three sections, each targeting a specific dimension of engagement. These items were developed using established engagement frameworks (Shah & Barkas, 2018) and were tailored to the EFL writing class context. Responses were recorded using a five-point Likert scale ranging from "strongly disagree" to "strongly agree." The questionnaire was distributed to all 40 participants through Google Forms, ensuring ease of access and efficiency in data collection. In addition, a semi-structured interview guide was developed for the qualitative phase of the study to explore students' experiences, challenges, and perceptions regarding their engagement. The guide included open-ended questions that delved into specific aspects of engagement, such as students' motivation, interaction with peers and instructors, and their feelings of connection or isolation. The flexibility of the semi-structured format allowed the researcher to ask follow-up questions to probe deeper into participants' responses, enriching the qualitative data.

## **Data Collection**

Data collection occurred in two phases, aligned with the mixed-method design. In the first phase, quantitative data were collected through the questionnaire distributed via Google Forms. Participants were given one week to complete it, ensuring they had sufficient time to provide thoughtful and accurate responses. The use of Google Forms streamlined data collection and minimized logistical challenges. In the second phase, qualitative data were gathered through face-to-face interviews with 10 participants selected based on their engagement levels as indicated in the questionnaire results. Each interview lasted approximately 30–45 minutes and was audio-recorded with the

participants' consent. The in-person format of the interviews facilitated natural interactions and allowed the researcher to observe non-verbal cues, which added depth to the data.

### **Data Analysis**

For data analysis, distinct methods were applied to the quantitative and qualitative datasets. Quantitative data from the questionnaire were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, such as means and standard deviations, were calculated to summarize the levels of cognitive, behavioral, and emotional engagement. Inferential statistics, including ANOVA, were used to examine differences in engagement levels across demographic variables such as age or prior experience with video conferencing tools. The reliability of the questionnaire was verified using Cronbach's alpha, ensuring consistent measurement across engagement dimensions. Qualitative data from the interviews were analyzed using thematic analysis based on Braun and Clarke's (2006) six-step framework. This involved familiarization with the data through transcription and repeated reading, coding to identify key ideas related to engagement dimensions, and grouping similar codes into broader themes. These themes were then reviewed, refined, and named to accurately represent the data. Finally, the themes were integrated into the research findings, supported by direct participant quotes to provide contextual depth.

### **Ethical Considerations**

Ethical considerations were a central component of this study. Informed consent was obtained from all participants, ensuring they were aware of the study's purpose, procedures, and their rights, including the option to withdraw at any time. Participant confidentiality was maintained by anonymizing data and using pseudonyms in qualitative reporting. Approval from the institutional ethics committee from UIN Raden Intan Lampung was secured prior to data collection, ensuring adherence to ethical standards throughout the study. This rigorous approach to data collection and analysis, coupled with ethical safeguards, ensured the reliability and validity of the findings while respecting participants' rights and well-being.

## **RESULTS AND DISCUSSION**

### **RESULTS**

#### ***Quantitative Findings***

The results from the questionnaire completed by 40 participants provide a detailed quantitative overview of students' engagement levels during video conferencing-based writing classes. Table 1 summarizes the findings across cognitive, behavioral, and emotional engagement dimensions.

**Table 1. The Findings Across Cognitive, Behavioral, and Emotional Engagement Dimensions**

Engagement Dimension	Mean Score	Standard Deviation	Engagement Level
Cognitive Engagement	4.12	0.52	High
Behavioral Engagement	3.78	0.63	Moderate
Emotional Engagement	3.95	0.56	Moderate to High

From the quantitative data, cognitive engagement achieved the highest score (M=4.12, SD=0.52), suggesting that students actively engaged in mental processes such as participating in discussions, completing writing assignments, and applying critical thinking during class. Many respondents strongly agreed that they remained focused during collaborative activities and benefited from features like real-time feedback. These findings confirm that cognitive processes were well-supported in the video conferencing format.

Behavioral engagement, however, scored moderately (M=3.78, SD=0.63). While a majority of students attended classes regularly and participated in scheduled activities, some reported difficulties such as late submissions or multitasking during sessions. Responses varied, with students attributing challenges to external factors like connectivity issues or the distractions of learning from home. This variability indicates room for improvement in fostering consistent behavioral participation.

Emotional engagement scored between moderate and high levels (M=3.95, SD=0.56). Students generally expressed feelings of motivation and connection during writing classes, supported by Zoom’s interactive features. However, occasional feelings of isolation and "Zoom fatigue" were evident in responses. This suggests that while emotional engagement was relatively strong, the virtual setting lacked some elements of interpersonal connection present in face-to-face learning environments.

### ***Qualitative Findings***

The qualitative data, derived from face-to-face interviews with 10 selected participants, provided rich insights into the nuances of student engagement. Thematic analysis revealed three key themes corresponding to cognitive, behavioral, and emotional engagement.

Students consistently highlighted that writing tasks required substantial intellectual effort. Features like screen sharing, collaborative editing, and real-time peer feedback were cited as particularly effective in maintaining focus and enhancing understanding. A participant noted, *“The live feedback from peers and instructors on Zoom made me more confident in editing my essays.”*

Behavioral engagement was less consistent, with students attributing challenges to technical and environmental factors. Several participants admitted to being distracted during classes or missing segments due to internet connectivity issues. One student explained, *“I often found it hard to concentrate when there were interruptions at home or when the internet lagged.”*

Emotional responses to the Zoom-based writing classes varied. Many students

valued the flexibility and convenience, which allowed them to participate without geographical constraints. However, some expressed that the lack of physical interaction made the learning experience less engaging. A participant shared, *“Although I appreciated the convenience, I sometimes felt detached from the class and missed the camaraderie of face-to-face discussions.”*

In summary, the integration of quantitative and qualitative data illustrates that while cognitive engagement is strong, behavioral and emotional engagement face challenges unique to online learning environments.

## DISCUSSION

The findings of this study align with and build upon prior research on student engagement in online learning, particularly in EFL contexts. The high levels of cognitive engagement observed in this study resonate with previous findings emphasizing the potential of video conferencing tools to support active intellectual participation (Hastomo, 2021; Maekawa, 2021). Zoom’s interactive features, such as screen sharing, breakout rooms, and real-time feedback, have been widely acknowledged as effective in fostering cognitive engagement in language learning settings (Aini et al., 2021). This study further confirms that these features are particularly valuable in writing classes, where critical thinking and collaborative editing are integral.

However, the moderate scores for behavioral engagement highlight persistent challenges in maintaining consistent participation in virtual classrooms. Similar to findings by Chamran et al. (2021), this study identifies technological issues, such as unstable internet connections, as significant barriers to behavioral engagement. These disruptions can hinder students’ ability to fully participate in class activities, as also noted by Mpungose (2021) in his study on e-learning in South Africa. Beyond technological factors, environmental distractions at home further complicate students’ ability to remain focused during online sessions.

The findings on emotional engagement present a dual narrative, consistent with prior studies. On the positive side, students valued the flexibility and convenience of Zoom, which allowed them to access classes from anywhere (Cheung, 2021; Pratiwi, 2022). Emotional engagement was also enhanced by features like the chat function, which enabled students to ask questions without fear of embarrassment. However, the negative aspects of emotional engagement, such as feelings of isolation and detachment, align with research by Raake et al. (2022), who identified “Zoom fatigue” as a common phenomenon in prolonged virtual learning contexts. These findings suggest that while Zoom facilitates learning, the lack of face-to-face interaction can diminish students’ sense of community and connection.

The qualitative data also highlight strategies that could enhance engagement. For instance, students emphasized the importance of real-time feedback in maintaining cognitive focus, a finding consistent with Al-Obaydi et al. (2023), who stressed the role of structured feedback in activating cognitive and emotional engagement. Behavioral

engagement, on the other hand, could benefit from incorporating gamification elements, as suggested by Bitrián et al. (2021). Features like progress tracking and virtual rewards could motivate students to participate more consistently and punctually in online classes.

To address challenges in emotional engagement, educators might consider implementing peer-led discussions and informal social interactions. Such strategies align with Singh et al.'s (2020) recommendations for fostering community in virtual classrooms. Additionally, adopting hybrid learning models that combine online and face-to-face interactions could mitigate feelings of detachment and provide students with a more balanced learning experience (Hastomo & Zulianti, 2022).

Therefore, this study contributes to the growing body of literature by providing a detailed analysis of student engagement in video conferencing-based EFL writing classes. It confirms the strengths of video conferencing tools in supporting cognitive engagement while shedding light on the ongoing challenges in behavioral and emotional dimensions. These findings underscore the need for a holistic approach to online learning that addresses technical, environmental, and interpersonal factors to maximize student engagement. By integrating insights from prior research with the current study's findings, educators can better leverage video conferencing technology to create more engaging and effective learning experiences.

## **CONCLUSION**

This study examined the levels of student engagement—cognitive, behavioral, and emotional—in video conferencing-based writing classes using Zoom, employing a mixed-method approach. The findings indicate that cognitive engagement was consistently high, with students actively participating in discussions and completing writing tasks facilitated by interactive features like screen sharing and real-time feedback. However, behavioral engagement was moderate, affected by external factors such as internet connectivity and environmental distractions. Emotional engagement was moderate to high, with students appreciating the flexibility of the platform but occasionally experiencing feelings of isolation. These results highlight the need for targeted strategies to enhance behavioral consistency and foster emotional connections in virtual learning environments.

The implications of this study suggest that while video conferencing tools are effective in promoting cognitive engagement, educators should address the technical and social challenges that limit behavioral and emotional engagement. Practical steps include incorporating gamification elements, structured feedback, and hybrid learning models to create a more inclusive and interactive learning experience. The study's limitations include its reliance on a single institution and a relatively small sample size, which may affect the generalizability of the findings. Future research should explore larger and more diverse populations, investigate the long-term impact of video conferencing on student engagement, and examine the role of



specific teaching strategies in mitigating engagement challenges across various EFL contexts.

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