

# Course-level learner engagement across face-to-face and synchronous online EFL learning: A mixed-methods study in Vietnam

Hong Nguyen Tran Viet <sup>a,1\*</sup>, My Nguyen Hong Ha <sup>b,2</sup>, Nhien Nguyen Thi Nhu <sup>b,3</sup>

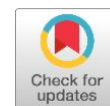
<sup>a</sup> Hong Bang International University, 215 Dien Bien Phu Street, Gia Dinh Ward, Ho Chi Minh City 70000, Vietnam

<sup>b</sup> Ho Chi Minh University of Banking, 36 Ton That Dam Street, Sai Gon Ward, Ho Chi Minh City 70000, Vietnam,

<sup>c</sup> FPT Polytechnic - FPT University, Block E2a-7, D1 Street, Saigon Hi-tech Park, Tang Nhon Phu Ward, Ho Chi Minh City 70000, Vietnam

<sup>1</sup> hongntv@hiu.vn \*, <sup>2</sup> mynhh@hub.edu.vn; <sup>3</sup> nhienntn@fe.edu.vn

\*Corresponding author



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## ABSTRACT

In recent years, learner engagement has received increasing attention due to its significant role in second language acquisition. However, few studies have compared course-level engagement across face-to-face (FTF) and synchronous online learning modalities among Vietnamese EFL university students. This study aims to address this gap by employing a mixed-methods research design to investigate the engagement of 132 university-level English-major students from the same cohort, all enrolled in a Reading and Writing 2 course at a public university in Vietnam. Participants experienced both traditional FTF and synchronous online learning environments. Quantitative data were collected via an adapted version of a validated engagement survey measuring behavioural, emotional, and cognitive dimensions of engagement. This was complemented by semi-structured interviews with selected participants to gain deeper insights into their experiences and perceptions. The quantitative results suggested that higher levels of behavioural and emotional engagement may be associated with FTF learning, while cognitive engagement remained relatively consistent across both modalities. The qualitative findings revealed that most participants preferred a blended learning format that combines the immediacy and interactional energy of FTF interaction with the flexibility of online learning. The findings highlight differences in engagement across online and FTF modalities, providing a basis for future research to investigate whether combining elements of both modalities can support multidimensional engagement.



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## 1. Introduction

Learner engagement is widely recognized as a foundational and critical topic in modern education (Hiver et al., 2021; Zhang, 2022), and has been described as the “holy grail of learning” (Sinatra et al., 2015, p.1). Engagement has been positively associated with performance and attainment in multiple educational contexts (Sinatra et al., 2015; Wong & Liem, 2021). Nevertheless, across educational disciplines, engagement has been conceptualised in diverse ways (Yuan & Dao, 2026).

In the field of Second Language (L2) acquisition and EFL education (Dao, Nguyen, et al., 2021; Dao, Nguyen, & Iwashita, 2021), learner engagement holds particular importance (Erdemutu et al., 2024; Li

& Li, 2022; Sun & Zhang, 2024). Language learning requires devoted and sustained effort toward the process, making active participation a crucial condition for L2 development (Hiver et al., 2024; Vo et al., 2024; Zhou et al., 2023). Engagement is sometimes summarised as the "active verb between the curriculum and learning" (Skinner & Pitzer, 2012, p. 23), meaning that engagement behaviours are essential to L2 learning and development. Despite the growing recognition that engagement is crucial for optimal learning (Philp & Duchesne, 2016; Reschly & Christenson, 2022), L2 engagement research has historically been slower than related concepts such as motivation, leading to the critique that the concept appears under-theorised and continues to suffer from conceptual haziness (Hiver et al., 2021).

To address this conceptual ambiguity, recent L2 scholars emphasize that engagement is not a fixed student trait, but a dynamic construct operating across distinct levels of granularity (Mercer, 2019; Sulis, 2022). Specifically, research distinguishes between micro-level engagement (momentary, task-specific cognitive, emotional, and behavioural involvement) and macro-level engagement (sustained commitment, belonging, and investment across an entire language course) (Sulis, 2022). Recognising that engagement trajectories across these two levels can diverge is essential for understanding how instructional environments shape learner participation. This distinction becomes particularly relevant in digital learning environments, which became increasingly prominent in L2 education following the rapid expansion of online teaching (Kara, 2022; Martin & Borup, 2022). Within these virtual learning spaces (Salta et al., 2022), Synchronous Online Learner Engagement (SOLE) is defined as a learner's intense multimodal involvement in technology-mediated tasks (Dao, 2024). The option to disable cameras in synchronous platforms creates challenges in identifying disengagement, as students may appear present without actively participating (Salta et al., 2022; Wang et al., 2022). While SOLE and traditional FTF engagement share the feature of interaction, the uniqueness of the technology-mediated context significantly shapes the manifestation of engagement (Qiu, 2024).

In Confucian-heritage learning environments like Vietnam, hierarchical teacher–student relations (Tai & Chen, 2024, 2025) and face-saving practices (Horn & Prentiss, 2026; Zhu & Mokhtar, 2026) strongly regulate public participation and classroom interaction norms (Hoang & Hoang, 2024; Zhang & Zou, 2022). In such contexts, how instructional modality mediates learner participation takes on heightened contextual significance. However, comparative evidence examining how engagement manifests across FTF and SOLE over an entire course remains limited. To address this gap, the present study compares learner engagement across FTF and synchronous online settings to examine how instructional modality shapes students' behavioural, emotional, and cognitive involvement across a full academic course. By tracking these dimensions longitudinally in the Vietnamese EFL context, this study offers a nuanced understanding of how digital and physical learning environments dynamically influence student investment in the language learning process.

### 1.1. Theoretical Framework

In language learning research, engagement was understood to be highly action-based and context-sensitive (Guo et al., 2025). The modern consensus defines it as encompassing situated notions of cognition, affect, and behaviours, in which action is a requisite component (Lawson & Lawson, 2013). In classroom contexts, learner engagement was often described as a multidimensional construct encompassing active, emotionally positive, and cognitively focused participation in learning activities (Dewaele & Li, 2021; Skinner & Pitzer, 2012). A foundational framework was the tripartite model proposed by Fredricks et al. (2004), which conceptualised engagement as comprising behavioural, emotional, and cognitive dimensions. Behavioural engagement included the extent and quality of students' participation in classroom activities, as well as the duration of time dedicated to specific tasks; the key indicators include active participation, sustained effort, and perseverance (Alzahrani, 2025). Emotional or affective engagement pertained to students' emotional responses within the learning environment (Fredricks et al., 2004). Empirical studies showed that learners' emotional engagement in tasks manifested in two key dimensions: positive feelings (enjoyment and interest in the topic) and negative feelings (anxiety or feelings of disconnectedness from peers) (Dao, Nguyen, et al., 2021). Cognitive engagement involved the intentional attention and the exertion of mental effort aimed at achieving academic objectives (Alzahrani, 2025; Bonner et al., 2023). It was evident through activities such as idea exchange, opinion evaluation, and information elaboration, along with behaviours, such as suggesting, reasoning, hesitating, and reiterating (Alzahrani, 2025; Fredricks et al., 2004). While originally developed in educational psychology, this model has been widely adapted in language learning contexts.

Recent L2 engagement research has expanded this model by emphasising the interactional and socially co-constructed nature of engagement (Hiver et al., 2021) and the importance of instructional modality and technological affordances. Furthermore, it is important to examine engagement across both micro-task and macro-course levels (Sulis, 2022). Macro course-level engagement was defined as a learner's sustained participation, initiative, and cognitive investment across an entire language course or program (Sulis, 2022). This perspective focused on broader, more stable patterns of behavioural effort and affective reactions toward the course as a whole, rather than immediate fluctuations observed during a single task or lesson. In online and FTF environments, the affordances for interactive channels (Bao, 2023; Tsai, 2024), ongoing feedback, and co-regulation differed substantially. From a sociocognitive perspective, such differences were expected to shape the manifestation of behavioural participation, emotional connectedness, and cognitive investment. Therefore, modality is not merely a delivery channel but a contextual variable that may mediate how engagement emerges and is sustained (Dao, 2024). Based on this contemporary reconceptualisation, the present study adopts the tripartite framework as an operational structure while situating it within current L2 engagement theory, which views engagement as dynamic, environmentally mediated, and experientially constructed. This framework is among the most widely adopted in both general education and L2 engagement research (Mercer & Dörnyei, 2020), and its stability across contexts supports cross-study comparison.

## 1.2. Review of related studies

The shift to offering language classes online, especially accelerated by events like the COVID-19 pandemic, has made examining learner engagement across communication modes theoretically and practically relevant (Carver et al., 2021; Chiu, 2022; Qiu, 2024; Sun & Zhang, 2024). Over the past decade, research has been conducted to compare the levels of students' engagement across different learning modalities.

Some studies have reported greater engagement in FTF learning environments, particularly in cognitive and emotional dimensions. For example, Carver et al. (2021) found that university-level L2 Spanish learners demonstrated higher cognitive and emotional engagement in FTF classes than in synchronous text-chat communication, although the difference in behavioural engagement was not statistically significant. Similarly, Salta et al. (2022) reported lower emotional engagement in an online learning context than in traditional instruction among university science students in Greece. The findings showed that this pattern associated with reduced human interaction (Salta et al., 2022). These findings suggest that FTF instruction may offer interactional conditions that support certain forms of engagement. However, the results should not be generalised to all dimensions of engagement or all educational contexts, as the studies differed in participants, learning activities, and measurement approaches.

In contrast, other research has identified engagement advantages associated with online and technology-mediated communication, particularly when supported by specific task design features and multimodal affordances. Qiu (2024), for instance, found that learners participating in synchronous video-based computer-mediated communication demonstrated greater behavioural engagement than their FTF counterparts during complex tasks. This indicated that the potential benefits of online communication depend heavily on task demands (Qiu, 2024). In comparisons between online communication modes, Dao, Nguyen, et al. (2021) reported higher cognitive, social, and affective engagement in video chat than in text chat. This finding was further supported by Aubrey (2022), who identified significantly greater focus and interest in video-chat-based collaborative writing. Beyond communication modality, Phan and Dao (2023) demonstrated that task design features such as learner control over task content significantly enhanced cognitive, social, and emotional engagement during collaborative writing, with cognitive engagement directly predicting subsequent text accuracy. These studies suggest that video-mediated interaction and task personalisation can effectively foster learner engagement in digital environments. However, researchers must distinguish between direct comparisons of FTF and online instruction (Qiu, 2024) and investigations into specific communication modes or task design features within online contexts (Aubrey, 2022; Dao, Nguyen, et al., 2021; Phan & Dao, 2023).

In contrast, a third strand of research has highlighted non-significant differences (Qiu & Bui, 2022) and contextual complexities across instructional modalities. Qiu and Bui (2022), for example, reported no significant differences in engagement dimensions associated with pre-task planning across FTF and online conditions. Moreover, research examining online learning during the COVID-19 pandemic has documented both positive and negative learner experiences simultaneously (Han et al., 2021; Salas-Pilco et al., 2022). Han et al. (2021) found favourable perceptions of online learning and high levels of

engagement, satisfaction, and self-efficacy among Chinese undergraduate EFL learners. Conversely, Salas-Pilco et al. (2022), in a systematic review of student engagement in Latin American higher education, identified perceived benefits of online learning alongside challenges such as stress, anxiety, and isolation.

While prior studies have focused on micro-level pedagogical task engagement (Tsai, 2024), less attention has been paid to how instructional modality shapes learners' engagement across an entire course, particularly in Vietnamese EFL contexts. Therefore, this study addresses this critical gap by comparing the general, multi-dimensional learner engagement experienced by students in traditional FTF classes versus SOLE. The two research questions are as follows:

1. To what extent do levels of behavioural, emotional, and cognitive engagement differ between FTF and synchronous online learning environments for university-level English majors?
2. How do students perceive and experience their engagement in these two instructional modalities?

## 2. Method

### 2.1. Setting and participants

This study employed a sequential explanatory mixed-methods design, with quantitative data collected and analysed first, followed by qualitative interviews to explain and elaborate on the statistical findings. Integrating quantitative and qualitative data can provide a more comprehensive understanding of research problems (Bazeley, 2024). The research was conducted at a public university in Ho Chi Minh City, Vietnam, where blended learning courses are currently implemented as part of the curriculum. The institution was selected because it consistently used both synchronous online and FTF modalities in English-language instruction.

Participants were undergraduate English majors, most of whom were in their second year. They were considered suitable for the study because they had experienced both synchronous online and FTF learning, enabling them to compare their engagement across the two contexts. With approximately 10 years of formal English learning experience, they were estimated to be at lower- to upper-intermediate proficiency levels based on placement in university English courses, although no separate standardized proficiency test was administered. Their relatively comparable educational background allowed the study to focus mainly on engagement differences across learning modalities rather than proficiency variation.

During the course, a total of 132 students enrolled in Reading and Writing 2 were invited to participate (convenience sampling). This course included five synchronous Zoom sessions and five FTF classroom instruction sessions, allowing direct comparison of engagement across modalities. The course was taught by one lecturer using the same teaching approach and class activities. FTF sessions typically involved pair/group discussion, in-class writing, oral presentations, and peer feedback. Synchronous online sessions followed similar learning objectives but relied on platform-mediated activities such as breakout-room discussion, shared documents, screen sharing, and chat-based participation. Thus, although the course content was comparable across modalities, the interactional affordances differed between the two learning environments.

**Table 1.** Participants' demographic information

| Characteristics                            | Category             | Number | Percentage |
|--------------------------------------------|----------------------|--------|------------|
| Year of study                              | First year           | 1      | 0.8        |
|                                            | Second year          | 93     | 70.5       |
|                                            | Third or fourth year | 38     | 28.8       |
| Age                                        | 18-19                | 86     | 65.2       |
|                                            | 20-21                | 46     | 34.8       |
| Device used for synchronous online classes | Laptop               | 100    | 75.8       |
|                                            | Mobile device        | 26     | 19.7       |
|                                            | Tablet               | 5      | 3.8        |

Upon completion of the questionnaire, 11 participants were purposively selected to take part in semi-structured interviews. The selection criteria were as follows: first, participants had to have experienced both synchronous online and FTF sessions in the same course; second, they had to complete the questionnaire; and third, they had to indicate willingness to participate in a follow-up interview. Among

those who met these criteria, participants were selected to represent a range of engagement levels and learning preferences so that the qualitative data could provide varied and information-rich perspectives on learner engagement across the two instructional modalities.

As shown in Table 1, most participants were second-year (70.5%), followed by third- or fourth-year (28.8%), while only one participant was in the first year of study. The participants were relatively homogeneous in age, with 65.2% aged 18 and 19, and 34.8% aged 20 and 21. In terms of access to synchronous online learning, most students used laptops (75.8%), suggesting that the majority had access to devices suitable for real-time online participation. However, some students relied on mobile devices (19.7%), tablets (3.8%), or desktop computers (0.8%), which may have influenced their experience of online interaction and participation.

## 2.2. Instrument

Data were collected using two instruments, including a questionnaire developed by Alzahrani (2025) and semi-structured interviews. Engagement item wording from the questionnaire was retained, but the six-point Likert scale was reduced to five points (1 = strongly disagree to 5 = strongly agree) to simplify responses and include a midpoint. The response scale was adapted to include an explicit neutral midpoint, with the intention of allowing respondents to express a neutral position without being forced to select agreement or disagreement (Kankaraš & Capecchi, 2024; Taufique et al., 2026). Because changing the number of response categories can affect response thresholds and category distributions, scores obtained from the adapted five-point scale were interpreted on their own metric and were not directly benchmarked against scores from the original six-point instrument. Following data collection, the psychometric properties of the adapted scale were evaluated empirically by examining Exploratory Factor Analysis (EFA) using Principal Axis Factoring with Direct Oblimin rotation performed separately for both learning contexts ( $N = 132$ ).

Sampling adequacy was confirmed for both the Online ( $KMO = 0.822$ ,  $\chi^2 = 1227.63$ ,  $p < 0.001$ ) and FTF ( $KMO = 0.883$ ,  $\chi^2 = 1600.74$ ,  $p < 0.001$ ) modalities. Factor extractions (Eigenvalues  $> 1$ ) yielded 61.82% and 63.20% cumulative variance explained, respectively, confirming robust structural validity across contexts. Internal consistency reliability was strong across all subscales of Online (Behavioural  $\alpha = 0.746$ , Emotional  $\alpha = 0.791$ , Cognitive  $\alpha = 0.791$ ) and FTF (Behavioural  $\alpha = 0.835$ , Emotional  $\alpha = 0.841$ , Cognitive  $\alpha = 0.825$ ) settings. These results confirm that the modified 5-point Likert instrument preserves the psychometric integrity of the original scale.

Prior to analysis, reverse-worded items were recoded for scale consistency. The 24-item survey (measuring behavioural, emotional, and cognitive engagement with 8 items each) was administered twice via Google Forms, after Session 5 (SOLE) and Session 10 (FTF), in English and back-translated Vietnamese. Although this within-subject design controlled for individual baseline differences, the fixed online-to-FTF sequence introduced potential confounds from time-related maturation, carryover effects, and growing familiarity with peers and procedures. Consequently, modality differences should be interpreted cautiously, and future studies should adopt counterbalanced crossover designs to isolate modality from order effects.

Following the survey, 30-minute semi-structured interviews were conducted to gain deeper insight into students' engagement across the two learning modalities. The interviews were conducted by the researchers using the same protocol, including open-ended questions that explored students' experiences, preferences and perceptions of interaction in synchronous online and FTF classes. All interviews were conducted in Vietnamese to reduce participants' anxiety about using English and to allow them to fully express their thoughts and feelings.

## 2.3. Data analysis

Quantitative data were collected and analysed using reliability tests, paired samples t-test, and effect size Cohen's tests in SPSS to identify differences in engagement across the two learning modes. A separate institutional review board process was not required under the university's internal procedures for this type of low-risk educational research. Administrative approval was obtained from the participating university, which is not named to protect institutional confidentiality. The study was conducted within normal teaching activities and involved no intervention beyond regular instruction. Participation was voluntary with informed consent and did not affect students' grades or lecturer relationships. Questionnaire data were anonymous, interview data were confidential, and all data were securely stored and used solely for research purposes.

Analysis of the qualitative data followed the procedures of a six-phase thematic analysis (Braun & Clarke, 2006). Transcripts were translated into English and cross-checked against Vietnamese originals. Data collection and analysis occurred concurrently until reaching conceptual saturation. To ensure rigor and intersubjectivity, two primary coders independently executed two coding cycles: initial open coding to develop a defined coding frame, followed by focused coding into categories and themes. Coding discrepancies were resolved through consensual debriefing, with a third senior researcher serving as an auditor for final adjudication. Final themes were reviewed, refined, and named against the full dataset.

The quantitative and qualitative findings were then integrated during the interpretation stage. The quantitative results for behavioural, emotional, and cognitive engagement were compared with the corresponding qualitative themes to identify areas of convergence and extension. Convergence was identified when qualitative themes provided contextual support for the quantitative findings, whereas extension was identified when qualitative findings provided additional insights beyond the quantitative results.

### 3. Findings and Discussion

#### 3.1. Findings

##### a) *Levels of behavioural, cognitive, and emotional engagement in synchronous online and FTF learning environments*

The internal reliability and consistency of the engagement scale were assessed before conducting the primary comparative analyses.

**Table 2.** Corrected item-total correlations per subscale

| Subscale               | Modality | No. of items | Cronbach's alpha | Corrected item-total correlation range |
|------------------------|----------|--------------|------------------|----------------------------------------|
| Behavioural engagement | Online   | 8            | 0.746            | 0.357 - 0.523                          |
| Behavioural engagement | FTF      | 8            | 0.835            | 0.475 - 0.653                          |
| Emotional engagement   | Online   | 8            | 0.791            | 0.307 - 0.682                          |
| Emotional engagement   | FTF      | 8            | 0.841            | 0.461 - 0.671                          |
| Cognitive engagement   | Online   | 8            | 0.791            | 0.439 - 0.581                          |
| Cognitive engagement   | FTF      | 8            | 0.825            | 0.429 - 0.632                          |

The results from Table 2 indicated acceptable and good levels of reliability, with Cronbach's alpha values ranging from 0.746 to 0.841. Corrected item-total correlations were also examined separately for each subscale and were all positive, ranging from 0.307 to 0.682 for the online subscales and from 0.429 to 0.671 for the FTF subscales. These results suggest that the items were sufficiently aligned with their respective engagement dimensions and that the subscales were appropriate for subsequent analysis.

**Table 3.** Descriptive statistics for learner engagement across modalities

| Engagement Dimension   | Modality | Mean | SD   |
|------------------------|----------|------|------|
| Behavioural engagement | Online   | 3.60 | 0.60 |
| Behavioural engagement | FTF      | 3.76 | 0.66 |
| Emotional engagement   | Online   | 3.77 | 0.67 |
| Emotional engagement   | FTF      | 4.07 | 0.65 |
| Cognitive engagement   | Online   | 3.77 | 0.63 |
| Cognitive engagement   | FTF      | 3.83 | 0.67 |

SPSS was used to conduct to identify differences across the two learning modes in each engagement dimension. Table 3 and 4 demonstrate the results of descriptive statistics and paired-samples t-tests. The findings presented in Table 3 showed higher mean scores in the FTF modality than in the synchronous online modality. The largest difference was found in emotional engagement, where the mean score was 4.07 for FTF and 3.77 for online. Behavioural engagement also showed a smaller difference, with a mean

score of 3.76 in FTF learning and 3.60 in online learning. Cognitive engagement showed only a slight difference, with a mean score of 3.83 in FTF learning and 3.77 in online learning.

**Table 4.** Paired-sample t-test result

|        |                                     | Mean  | SD    | Standard Error Mean | 95% Confidence Interval of the Difference |       | t     | df  | Sig. (2-tailed) |
|--------|-------------------------------------|-------|-------|---------------------|-------------------------------------------|-------|-------|-----|-----------------|
|        |                                     |       |       |                     | Lower                                     | Upper |       |     |                 |
| Pair 1 | FTF – Online Behavioural Engagement | 0.163 | 0.530 | 0.046               | 0.072                                     | 0.254 | 3.529 | 131 | 0.001           |
| Pair 2 | FTF – Online Emotional Engagement   | 0.298 | 0.684 | 0.060               | 0.180                                     | 0.416 | 5.007 | 131 | 0.001           |
| Pair 3 | FTF – Online Cognitive Engagement   | 0.063 | 0.430 | 0.037               | -0.011                                    | 0.137 | 1.696 | 131 | 0.092           |

As shown in Table 4, three paired-samples t-tests were conducted. A Bonferroni-adjusted alpha level of 0.017 was applied to control for the increased risk of Type I error. The results showed behavioural and emotional engagement remained significantly higher in FTF learning than in synchronous online learning, with  $p < 0.017$ . However, cognitive engagement did not differ significantly between the two modalities, with  $t(131) = 1.70$ ,  $p = 0.092 > 0.017$ .

Paired-samples Cohen's d effect size was performed to evaluate the practical magnitude of the differences in student engagement across the two modalities.

**Table 5.** Paired-samples Cohen's d

| Dimension              | t    | Cohen's dz | Interpretation            |
|------------------------|------|------------|---------------------------|
| Behavioural Engagement | 3.53 | 0.31       | small                     |
| Emotional Engagement   | 5.01 | 0.44       | small-to-moderate         |
| Cognitive Engagement   | 1.70 | 0.15       | small and non-significant |

Effect-size estimates in Table 5 indicated that the modality difference was small for behavioural engagement, with  $dz = 0.31$ , and small-to-moderate for emotional engagement, with  $dz = 0.44$ . The effect for cognitive engagement was small, with  $dz = 0.15$ , and was not statistically significant, suggesting that the mode of instruction did not substantially influence students' depth of processing. Although FTF learning produced higher behavioural and emotional engagement, the practical magnitude of the differences was modest.

Overall, the quantitative findings indicate that FTF learning was associated with significantly higher behavioural and emotional engagement, whereas cognitive engagement remained statistically comparable across FTF and synchronous online modalities.

#### b) Students' perceptions and experiences of engagement in the two learning modalities

##### Behavioural Engagement

##### Participation pattern

All participants ( $n=11$ ) reported that they were generally more active and engaged in traditional classrooms. For instance, Student 3 (S3) and Student 4 (S4) stated that they often "raise their hands" to speak more often, while Student 10 (S10) added the factors that directly affect his engagement:

*Because for me, when I attend face-to-face classes, I feel that I can interact and connect with the teachers. That sense of connection helps me stay more focused. In contrast, in online classes, I am just looking at a screen and do not really interact with anyone.*

Some participants (Student 1 (S1), Student 2 (S2), S4, Student 6 (S6), and Student 9 (S9)) perceived participation in online synchronous classes as more limited and less active, as they only use "chat box," "never turn on the microphone" and are reluctant to use the "raise hand" feature.

##### Managing Distraction, and Coping Strategies

All participants (n=11) described a range of distractions they encountered in both learning contexts, which generally fell into three categories: contextual factors (“chatting with friends,” “the class is too noisy”), learners’ fatigue (“sleepy,” “not in a good mood”) or digital distractions (“my phone,” “the Internet” or “social media”). For online synchronous settings, students also reported instances where they experienced “unstable internet connections” or “audio lagging,” which partly led to their distraction.

To deal with that, participants employed different strategies to regain their focus. In FTF settings, several participants stated that through the teacher’s presence and classroom norms, they were able to shift their focus back on the lesson. For instance, Student 5 (S5) explained, “When learning face-to-face, I sometimes get distracted, but I can regain focus quickly because the teacher or friends remind me.” However, in online synchronous lessons, it falls on students’ self-regulation as S10 explained, “I try to stop scrolling on my phone by putting it away and regain my attention.”

### **Emotional Engagement**

#### *Emotion patterns*

Overall, students reported experiencing significantly different emotions across two settings. In traditional FTF classes, several participants (S6, S10, and Student 11 (S11)) described feeling “excited” and “thrilled” prior to the lesson, while others mentioned feeling “nervous” or “anxious” due to the possibility of cold-calling or in-class tests (S1, S3). Despite the varied pre-lesson emotions, participants consistently described a transition toward more positive feelings later in traditional FTF lessons, as Student 7 (S7) explained, “I enjoy interaction, so for me, studying FTF brings more enjoyment and inspiration, which motivates me to focus better.” In online classes, negative feelings are noted to appear more frequently, such as feeling “sleepy”, “lazy”, or “bored”. Several attributed their boredom as the result of “sitting in front of a screen alone” (S3), or “When studying online, I feel as though I am learning alone, and I sometimes feel a bit isolated.” (S4)

#### *Motivational factors*

Across both learning settings, factors influencing students’ emotional engagement can be broadly categorised as extrinsic and intrinsic. Extrinsic factors included the physical learning environment (“Offline space feels open and lifts my mood”- S11), social interaction (“Online I feel alone; offline I feel part of a community”- S4) and teacher energy (“If the teacher is quiet or the class is dull, I lose energy quickly” - S10). Describing social interaction, many (S3, S4, S6, S7, and S10) agreed that the direct “connection” with teachers and peers in traditional FTF settings enhanced their motivation, in contrast to feeling “isolated” and “lonely” in online ones. Furthermore, participants also emphasised teachers’ role in keeping their attention, as S4 recalled: “When the teacher gives movement games or bonus points, I feel instantly excited and re-energized.” They also appreciate teachers “high energy”, “sense of humour” and “enthusiasm” to lift their mood from tiredness to excitement. As for intrinsic motivation, some participants (S1 and S6) suggested that although personal interest in the subject is important across both modalities, internal drive becomes more critical in online settings:

*For example, when studying online, I feel that I can be more autonomous and independent, and I can also develop the ability to work with others in an online environment. In contrast, in face-to-face classes, I feel that it is easier to concentrate and that I am more actively engaged. (S6)*

### **Cognitive Engagement**

#### *Asking for feedback and problem-solving strategies*

As for seeking feedback, participants stated that it is easier to find support in the traditional FTF environment than in the online one, as S4 explained, “Offline errors get corrected immediately, online mistakes go unnoticed,” and S6 added, “In traditional classes, teachers can guide me right away, so I fix errors faster.” In addition, many students expressed a strong preference for peer and teacher support when encountering learning difficulties in FTF settings, as S2 noted, “In FTF classes, it’s easier to ask classmates.” S9 further elaborated this:

*When I’m studying offline and don’t understand something, the quickest way is to turn to my friend and ask them. If my friend also doesn’t understand, then I wait until the teacher finishes explaining and ask the teacher right away.*

Online learning, however, witnessed an increased reliance on technology, as some students shared, “I recorded the screen to re-watch later” (S2), or “Online, I search on the internet or use AI tools” (S4) or

“I use online platforms such as YouTube to review and revisit the lesson content” (S8). Some students also indicated their sequence of solving problems in online class as follows: “I first think with prior knowledge, then search, then ask peers or teachers” (S11).

To summarise, Table 6 presents a joint display integrating the quantitative and qualitative findings across the three dimensions of learner engagement.

**Table 6.** Joint display mapping Quantitative and Qualitative findings

|                        | Quantitative Result                                               | Qualitative Themes                                                 | Integration Type |
|------------------------|-------------------------------------------------------------------|--------------------------------------------------------------------|------------------|
| Behavioural Engagement | FTF > Online, significant, small effect ( $d_z = 0.31$ )          | Participation patterns; managing distraction and coping strategies | Convergence      |
| Emotional Engagement   | FTF > Online, significant, small–moderate effect ( $d_z = 0.44$ ) | Emotion patterns; motivational factors                             | Convergence      |
| Cognitive Engagement   | No statistically significant difference ( $d_z = 0.15$ )          | Asking for feedback and problem-solving strategies                 | Extension        |

The meta-inference indicates that FTF learning was associated with higher self-reported behavioural and emotional engagement, while cognitive engagement was maintained across both modalities through different strategies. Overall, the findings suggest that the intensity and form of learner engagement may differ across modalities.

### 3.2. Discussion

#### a) Behavioural engagement

The quantitative findings indicate higher behavioural engagement in FTF learning ( $M = 3.76$ ) than in synchronous online settings ( $M = 3.60$ ), although the effect size was small ( $d_z = 0.31$ ). This suggests that students reported being more attentive and participating more in traditional FTF classrooms, while synchronous online settings still support behavioural engagement to a certain extent. Qualitative data reflect a similar pattern and further explain this through participation patterns and managing distraction strategies. Participants described their participation in the traditional FTF mode as more active because they can raise their hands, speak freely, and interact directly with teachers and peers. In contrast, participation in online classes was limited to mostly text-based interaction.

In addition, although students reported experiencing distractions in both settings, the strategies they employed to manage attention across modalities were significantly different. In FTF settings, participants regained focus through external cues, such as teacher reminders or peer influence. Conversely, in online settings, students reported relying on self-initiated strategies, such as putting away their phones or consciously redirecting their attention. This emphasizes the importance of the teacher’s presence as a “classroom cue” in traditional FTF classes (Fredricks et al., 2004) and the role of the online environment in forming students’ self-discipline (Salas-Pilco et al., 2022). The present findings differ from those reported by Qiu (2024), who reported higher behavioural engagement in completing collaborative online learning tasks than in traditional settings, and Carver et al. (2021), who found no significant difference in behavioural engagement between FTF and synchronous text-chat interaction. While the current study examines students’ perceived engagement at the macro level (Sulis, 2022), previous studies often focused on engagement within specific tasks or at the micro level. This shift in focus may account for the distinction in findings for behavioural engagement across the two modalities.

#### b) Emotional engagement

Regarding the emotional dimension of engagement, quantitative findings indicate that this dimension exhibits the largest differences across modalities ( $M=4.07$  for FTF classes compared to  $M= 3.77$  for online classes), with a small-to-moderate effect size ( $d_z=0.44$ ). Overall, the data show that students reported feeling more positive toward traditional FTF settings.

To explain this difference, interview data reveal students’ emotions and the factors associated with them. Participants frequently described feeling “excited” and engaged in traditional FTF classes, although some reported feeling “nervous” before the lessons. Such anxiety may arise from Vietnamese classroom practices and sociocultural expectations, including concerns about “losing face” when being called upon without prior notice (Horn & Prentiss, 2026; Zhu & Mokhtar, 2026). In contrast, in online learning,

negative emotional experiences, including feeling “bored,” “sleepy,” or “tired,” were reported to happen quite often. These emotions may be linked with reduced stimulations in online environments when students are required to remain in front of a screen for extended periods. This finding is thus consistent with previous research reporting lower emotional engagement in synchronous online contexts compared to FTF settings (Carver et al., 2021; Han et al., 2021; Phan & Dao, 2023).

Accounting for these emotions, qualitative data also reveal the factors associated with learners’ emotional experiences. In the traditional FTF environment, elements such as the physical environment, social interaction, and teachers’ enthusiasm play key roles in forming students’ positive emotions. Therefore, when switching to the synchronous online mode, the absence of social interaction and technical instability may lead to an increase in negative feelings. These findings align with previous studies suggesting that limited social interaction may be linked with stress, anxiety, isolation, and lower emotional engagement (Salas-Pilco et al., 2022; Salta et al., 2022). However, participants in this study also noted that the online environment may support their development of independence and autonomy.

#### c) *Cognitive engagement*

While no statistically significant difference was detected for cognitive engagement ( $p = 0.092$ ,  $d_z = 0.15$ ), the confidence interval  $(-0.012, 0.137)$  does not rule out a small FTF advantage, and this null result should not be interpreted as evidence that the two modalities produce equivalent cognitive engagement. The qualitative data, thus, examined how such effort, if not different in level, varied across the two learning settings.

Students reported using different strategies to sustain engagement across contexts. In FTF settings, participants relied primarily on immediate interaction with peers and teachers when encountering difficulties, such as asking classmates or seeking teacher support. In contrast, in online settings, participants reported using alternative strategies, such as recording lessons, revisiting materials, searching for information on online platforms, and using AI-based resources. Additionally, some participants perceived being hesitant to ask questions online due to concerns that their questions might be left unanswered or not addressed promptly. While this hesitancy reflected students’ affordance for interaction (Bao, 2023; Tsai, 2024), it may also exhibit a sociocultural effect of face-saving practice in Vietnamese culture (Horn & Prentiss, 2026; Zhu & Mokhtar, 2026) as students do not want to be “ignored.” These findings, therefore, partially align with Qiu and Bui (2022), who reported no substantial differences in engagement across FTF and synchronous computer-mediated contexts. However, they differ from Carver et al. (2021), who found higher cognitive engagement in FTF settings compared with text-based synchronous communication. This difference might highlight the significance of the present study’s macro-level. In this study, students experienced the course with the same instructor, materials, and learning objectives in both settings; thus, they may have maintained comparable levels of cognitive effort despite differences in the strategies applied to solve problems.

#### d) *Modality preferences*

The quantitative and qualitative findings of this study indicate that participants generally preferred traditional FTF classes over synchronous online settings. These findings are consistent with previous studies (Qiu, 2024; Qiu & Bui, 2022; Salta et al., 2022), which similarly reported learners’ preference for traditional classroom environments, often associated with higher levels of behavioural and emotional engagement. Nevertheless, qualitative data also show that participants recognized the flexibility and convenience afforded by online learning, particularly in managing schedules and reducing commuting demands. In conclusion, many participants expressed a preference for a hybrid model, as both FTF and online environments can support behavioural, emotional, and cognitive engagement, although through different means.

### 3.3. Implications

The study offers several pedagogical implications for L2 teachers and lecturers whose tasks now involve navigating lessons in both traditional and online settings. Given the lower behavioural and emotional engagement reported in online sessions, teachers may consider incorporating interactive formats that approximate FTF social dynamics, though the effectiveness of specific strategies requires empirical testing. Similarly, Sun and Zhang (2024) also recommended creating a welcoming and collaborative environment by organising virtual group discussions and breakout sessions. Providing more immediate feedback, which simulates the social dynamics of traditional FTF classrooms, is also necessary (Dao, 2024).

Regarding modality preference, while student preferences suggest potential receptivity to hybrid formats, the present study did not test blended conditions. Institutions considering such models would benefit from empirical evidence comparing hybrid engagement outcomes against single-modality courses. With regards to the hybrid models, Salas-Pilco et al. (2022) also reported that they offer more benefits than a traditional FTF alone, especially in learning gain and engagement. While in-person sessions can foster participation, enthusiasm, and connection, online learning promotes learners' autonomy and self-regulated strategies (Dao, 2024; Salas-Pilco et al., 2022). Although online synchronous settings may provide fewer opportunities for spontaneous interaction than FTF classes, they still play a critical role in encouraging learners' independent learning habits. Future research might explore whether the sequencing within a blended course influences engagement outcomes.

#### 4. Conclusion

This study investigates learner engagement across two instructional modalities, including synchronous online and traditional FTF classes. Drawing on both quantitative Likert-scale data and qualitative interview findings, the results indicate clear distinctions in learners' behavioural, emotional, and cognitive engagement across the two settings. Participants reported significantly higher levels of behavioural and emotional engagement in FTF settings compared with synchronous online settings, while no statistically significant difference was detected in cognitive engagement across modalities. Participants associated these differences with factors such as teacher presence, peer interaction, and real-time feedback, though the present design does not permit causal inference. Additionally, the comparative evidence suggests that while traditional classes foster social energy and sustain students' behavioural and emotional engagement, virtual settings may encourage self-reflection, control, and learning autonomy. Pedagogically, language instructors in higher education navigating in-person and online classrooms should incorporate interactive digital activities and timely feedback to enhance behavioural and emotional engagement. To encourage active participation across behavioural and emotional dimensions, language instructors could use multimodal chat box and non-verbal interactions, collaborative writing on Google Docs, or short task-based discussions in breakout rooms.

The generalisation of these findings should be approached with caution due to several limitations. First, this study used the fixed sequence of instructional modalities, with SOLE strictly preceding FTF instruction. Although the same cohort of learners participated in both modalities, this non-counterbalanced sequence prevents the genuine effects of instructional modality from being isolated from potential order, time, and carryover effects. As a result, observed differences in engagement between the two modalities should be interpreted cautiously, as they likely reflect a combination of modality-specific affordances and sequence-related factors. Future research should implement counterbalanced or randomised crossover sequences to disentangle true modality effects from order and practice effects. Second, the study relied on self-report surveys and interviews, which captured students' perceptions but may not fully reflect their actual classroom engagement. Future research should incorporate classroom observations or teacher reports to validate these perceptions. Third, the data were collected from a single public university in Vietnam and focused mainly on English-major students, whose motivation and learning experiences may differ from those of other student groups. Further studies involving multiple institutions and more diverse participants would enhance the validity and representativeness of the findings. Finally, longitudinal designs are needed to examine how learner engagement develops over time as students adapt to different instructional modalities.

Despite the aforementioned limitations, this study contributes to a deeper understanding of multifaceted learner engagement in modern EFL contexts. The empirical evidence indicates that learner engagement differs not only in terms of degree but also in form. This underscores the importance of leveraging the strengths of both traditional FTF settings and online synchronous environments to support meaningful engagement, specifically in the Vietnamese context.

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### Declarations

- Author contribution:** Author 1 (first and corresponding author) was responsible for the conceptualization, methodology, investigation, data curation, project administration, and writing (review and editing). Author 2 contributed to the investigation, data curation, formal analysis, and writing (review and editing), taking primary responsibility for the qualitative data analysis and the presentation of the qualitative findings. Similarly, Author 3 participated in the investigation, data curation, formal analysis, and writing (review and editing), with primary responsibility for the quantitative data analysis and the presentation of the quantitative findings. Furthermore, all authors contributed to the development of the research implications, critically reviewed and revised the manuscript for important intellectual content, approved the final version for publication, and agreed to be accountable for all aspects of the work.
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- Conflict of interest:** The authors declare that they have no competing interests.
- Ethical declaration:** We, as authors, acknowledge that this work has been written based on ethical research that conforms to the regulations of our university and that we have obtained permission from the relevant institute when collecting data. The authors fully support ELTEJ's commitment to maintaining high standards of academic integrity, professional conduct, and honesty in all academic and professional activities.
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