



Exploring the Dimensions of Learning Engagement in Online English Education: Implications for Teaching Strategies

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ARTICLE INFO	ABSTRACT
Article history: RECEIVED 13 July 2025 ACCEPTED 20 July 2025 PUBLISHED 15 August 2025 Keywords: Learning engagement; online learning; teaching strategies	While research on second language engagement has grown significantly in recent years, the majority of empirical studies have focused on traditional classroom environments. Recognizing the complex, context-dependent nature of engagement, scholars have increasingly advocated for investigations into this construct within digital learning spaces. Addressing this research gap, the present exploratory study examines the multidimensional aspects (behavioral, cognitive, emotional, and social) of engagement across a semester-long Comprehensive English 2 course. The mixed-methods approach incorporated questionnaire responses from 42 participants along with follow-up interviews with 6 selected students at a Nanchang-based university. The results demonstrate how engagement operates as a dynamic, developmental process throughout the learning period. Drawing on participants' firsthand accounts, the study proposes several evidence-based instructional recommendations for optimizing engagement in virtual language learning contexts.

1. Introduction

The classroom is the primary venue for knowledge internalization and serves as the main battlefield for student learning. However, encouraging teachers to fully utilize online teaching platforms to provide students with autonomous learning pathways and a wealth of self-directed learning resources is a new teaching paradigm that aligns with contemporary educational philosophies^[1]. However, when students participate in online learning activities, they are prone to distractions, laziness, cheating, and shifting learning goals—behaviors that indicate a lack of engagement. Therefore, effectively promoting learning engagement in an online environment is crucial for ensuring the quality of students' online learning experiences^[2].

In the field of psychology, the concept of engagement has been extensively studied, particularly within educational psychology and developmental psychology. Whereas in the applied linguistics, engagement is a relatively new yet growing area of research^{[3][4]}. Over the past decades, more and more attention has been contributed to the construct of learning engagement abroad, primarily emphasizing the role of learning engagement in enhancing teaching effectiveness and

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academic achievement, while examining the interplay between learning engagement and other learning variables, such as learning engagement and learning beliefs^{[5][6][7]}, learning engagement and learning behaviors^{[8][9]}, learning engagement and technology use^{[10][11][12]} and learning engagement and learning outcomes^{[13][14]}.

Meanwhile, Chinese scholars and educators are actively aligning with global developments. Learning engagement has garnered increasing attention in the field of Chinese education, achieving notable results both theoretically and practically. Guo & Liu^[3] clarify the basic definition of learning engagement by examining its connotations and dimensions. In terms of theoretical models of learning engagement, Zhang Qi & Wu Fat^[15] constructed a theoretical model of learning behavioral engagement in the "Internet+" blended learning environment by reviewing literature on traditional educational settings and learning analytic perspectives. Ren Qingmei^[16], for student engagement in college English classrooms, put forward a theoretical framework of a multidimensional evaluation system which possesses the characteristics of a dynamic system and synergistic process. Based on NSSE and HESES, Luo Yan et al.^[17] and Zhu Hong^[18] developed the "NSSE-China Scale" and the "Capital University Student Development Questionnaire" respectively, according to the actual conditions of Chinese college students, to investigate learning engagement among Chinese college students. Empirical research on the relationship between learning engagement and academic performance is also a popular area of study^{[2][19][20]}.

However, existing research on English learning engagement has largely focused on offline environments, while studies on college students' engagement in online English learning are relatively limited and lagging. In light of this, this paper focuses on English online learning engagement, using the course of Comprehensive English 2 as an example to analyze students' engagement in an online environment. It explores the relationships and roles among various dimensions of engagement, providing insights for optimizing online English teaching design.

2.1 Engagement

Engagement has been regarded as "the holy grail of learning"^[21]. Researchers generally agree that learning engagement is not a unidimensional but rather a multidimensional concept; however, there are varying opinions regarding the specific dimensions it encompasses. Fredricks et al.^[22] first proposed to divide learning engagement into three constructs (behavioral engagement, emotional engagement, and cognitive engagement), and in this most-widely-recognized three-part typology, they interact and exert reciprocal influence on one another. But in an online environment, social engagement is also an important dimension of learning engagement, emphasizing the interaction and collaboration between students, peers, teachers, and other learners during the learning process. Research^{[23][24]} has shown that social presence is significantly positively correlated with learning engagement. Therefore, this paper preliminarily identifies these four constructs as the main factors influencing college students' engagement in online learning.

2.1.1 Behavioral engagement

According to Giulia^[4], behavioral engagement refers to observable behaviors when students are on task such as their active involvement, participation and persistence. Behavioral engagement, as a carrier of other forms of engagement, in an online environment can be specifically described as students' degree of self-directed learning (clarifying learning goals and requirements, self-evaluation and reflection, and use of management tools), their ability to concentrate (completion rate of individual tasks), their capacity to overcome learning difficulties (workload of challenging tasks, use of cognitive tools, and quality of challenging tasks), and their participation in both in-class and extracurricular group learning activities (attendance, time invested, and resource access

frequency). At the same time, the observable forms of behavioral engagement online should also be put into consideration because some learners may intentionally pretend to be engaged in front of the teacher^[25] while not genuinely participating in the activity at hand and some learners tend to be silent observers who might benefit from other peers' or/and student-teacher interactions^[26].

2.1.2 Emotional engagement

The essence of learning engagement is the emotional investment that students make in the learning activities^[27]. A body of research on emotional engagement has looked into enjoyment and interest^{[28][29][30]} or even anxiety^[30] in EFL students, understanding of the value of language learning^{[31][32]}, and student-student and student-teacher relationship^[33]. These studies underscore the profound impact that emotional investment has on both the learning process and outcomes. However, much of the discourse surrounding emotional engagement has been framed within the broader concept of learning engagement. Emotional engagement interacts with cognitive engagement and is influenced by constructs such as individual differences, learning methods, and learning strategies. Together, these elements shape the overall learning experience. Additionally, a notable deficiency in emotional engagement is identified as one of the primary reasons for the lack of sufficient learning engagement observed among university students in China today^[34]. Therefore, addressing emotional engagement in educational practices is essential for enhancing overall student engagement and improving academic outcomes.

2.1.3 Cognitive engagement

Cognitive engagement refers to the mental effort and sustained attention students invest in understanding and mastering academic tasks^[35]. It is the students' psychological investment in tasks to comprehend and master content, encompassing various strategies, which can be categorized into two main types: first, the use of meta-cognitive strategies such as setting learning goals, developing study plans, creating learning opportunities, self-monitoring, and self-evaluation; second, the use of cognitive strategies that involve utilizing reference materials and learning tools, taking notes, summarizing, inferring and predicting, and adjusting learning materials or content^[3]. Previous research has highlighted several factors that influence cognitive engagement in learning, particularly emphasizing the significant impact of teacher support^[36], the characteristics of peer groups^[37], and the presence of intellectually challenging tasks.

2.1.4 Social engagement

Learning engagement is a multidimensional meta-concept, suggesting that it is adaptable and subject to change over time. In the context of online language teaching, engagement is understood as a state characterized by heightened concentration and active participation. Social presence refers to the degree to which an individual is perceived as a "real person" during the process of communication through media, as well as the extent to which they feel connected to others^[24]. In virtual environments, individuals can convey their personalized identities by employing emotional symbols, storytelling, or humorous language, thereby presenting their authentic selves to other online learners and fostering a sense of connection with them^[38]. Research indicates that social presence significantly enhances interpersonal interactions within virtual learning contexts, facilitating constructive collaboration among learners. This, in turn, strengthens their sense of belonging and cohesion while mitigating feelings of isolation often associated with online learning^[39]. It is also the reason why we incorporate social engagement into the present study.

2.2 Engagement in online learning

At present, in the field of applied linguistics, three avenues on L2 online learning engagement can be summarized as follows:

Firstly, online platforms enable students to improve their learning engagement. The rapid advancement and widespread adoption of communication and information technologies have significantly impacted various aspects of human life. In the realm of education, this shift has led to notable improvements in the learning and the teaching of second and foreign languages^[4]. The transition from traditional technology use to more social and integrative applications has given rise to Computer-Assisted Language Learning (CALL) and Mobile-Assisted Language Learning (MALL), showcasing the Internet's potential in language instruction^[40]. The online platforms may significantly affect the extent to which students engage with the learning process, as they facilitate interactive and collaborative opportunities that enhance participation and motivation, which have been evidenced by some research^{[36][41][42]}.

Furthermore, the academic dimension of engagement encompasses the behavioral, emotional and cognitive efforts that students invest in mastering the information and skills associated with academic activities. This aspect reflects not only the active participation of students in their learning processes but also their mental commitment to understanding and applying the material effectively. The other dimension of student engagement, identified as social engagement, puts a focus on students' investment in the nonacademic activities with an aim to compensate for insufficient interaction with teachers and alleviate students' feelings of loneliness^[43]. More and more research focus on learning engagement in online environment. Huang et al.^[40] investigate college students' perceptions of cognitive and emotional engagement in two different activities—Teacher's Q&A and online discussions—highlighting significant differences in engagement levels influenced by activity features and teachers' roles, using both quantitative and qualitative data analysis methods. Ouyang et al.^[44] employ a quasi-experimental study to investigate the impact of Duolingo on EFL learners' willingness to communicate and engagement, revealing significant improvements in cognitive and emotional engagement, as well as communicative confidence, among students using the app compared to a control group.

3. Research design

3.1 Research questions

Across all levels of analysis, little research has looked into learning engagement from the four aspects, namely, behavioral, emotional, cognitive and social engagement, exploring the factors that influence the level of engagement and academic performances. Besides that, the researchers' focus on online learning engagement has primarily been at the task level, with little attention given to how engagement at the course levels interrelates with broader timescales such as the academic term or year.

In order to fill these gaps, the present study examines the factors that influence the level of behavioral, emotional, cognitive and social engagement over the course of Comprehensive English 2 spread one semester with the aim to conduct a preliminary investigation into the students' perception of engagement in online activities. Problems caused are also investigated and some pedagogical strategies are suggested. Specifically, two research questions were asked as follows.

Q1: What specific factors contribute to behavioral, emotional, cognitive and social engagement during the course?

Q2: What pedagogical suggestions can be given to improve students' engagement during the course?

The online activities mentioned above mainly includes online discussion and online assignment. The former activity is conducted on QQ groups (QQ is a widespread multi-platform instant

messaging software in China) where all the students have entered in, and the teacher will provide discussion topics that are closely aligned with the unit's content and establish a deadline for students to articulate their ideas freely. For the latter activity, the platform employed is the Chaoxing App (a popular and easily-accessible online learning platform for students) where the teacher will also assign tasks that are aligned with the unit's content, utilizing a diverse range of question types, including multiple-choice vocabulary exercises, sentence translations, cloze tests, and reading comprehension activities, etc. The Chaoxing platform will automatically grade the assignments based on the answers provided by the teacher and generate corresponding scores. Their performance will be recorded for the course's procedural evaluation.

3.2 Participants

The participating students were 42 freshmen English majors from one class at the college where the research took place and the teacher/the researcher worked. The course of Comprehensive English 2 was one of their compulsory courses during the second semester of the first academic year. Currently, the number of university students in China opting for a language degree is on the decline, and the college where the researcher is employed is no exception, as evidenced by a drop in English major enrollments from 172 to 84. In response to the identified challenges, the researcher concentrated on the context of tertiary education in China to investigate strategies for fostering and sustaining students' engagement in language learning within this environment.

The majority of participants ($n = 37$) were females while five were males. Students are compelled to take a variety of courses, among which Comprehensive English must be completed over four semesters, spanning the entirety of the first and second academic years. It carries 4 credits and consists of 64 class hours for each semester, making this course one of the core subjects for English major students. The course is designed to enhance students' proficiency in the English language through a structured curriculum that encompasses various aspects of language learning, including developing skills in speaking, listening, reading, and writing, as well as a strong emphasis on grammar and vocabulary acquisition.

3.3 Instrument

In an online environment, learning engagement not only positively predicts academic achievement but also serves as a predictor of online learning willingness, persistence, and effort levels. It is one of the important evaluation indicators of online learning effectiveness^[2]. Based on the analysis in the part of literature review, this study preliminarily identifies four dimensions—behavioral engagement, cognitive engagement, emotional engagement, and social engagement—as the primary influencing factors of college students' online English learning engagement. This study, according to the learning engagement scale in online learning environments^{[2][11][16]}, incorporates an understanding of the connotations of the four dimensions and extracts the elements contained within each dimension from relevant literature^{[3][15][19]}, forming a survey questionnaire for college students' engagement in English online learning.

The questionnaire incorporates subjects and technological backgrounds such as "English learning" and "online learning," with item statements closely aligned with the core concepts and contextual conditions. The questionnaire is composed of two main parts: the first part is information of their age and gender and the second part consists of 20 five-point Likert scaled items used to measure students' engagement from the behavioral, emotional, cognitive and social aspects. Behavioral engagement encompasses various indicators, including individual effort, interactions between students and teachers, as well as peer interactions (e.g. I actively took part in

discussion). Emotional engagement includes aspects such as interest, positive emotions, and a sense of belonging within a group (e.g. , I'm interested in the theme of the text). Cognitive engagement is characterized by indicators like deep learning, autonomous planning, and self-monitoring (e.g. I focused on the understanding of linguistic knowledge). Lastly, social engagement is defined by the frequency of interactions, collaborative learning experiences, and the presence of positive emotional experiences (e.g. I thought group study helps to strengthen my sense of belonging). The questionnaires were distributed to the participants during the class break on the 16th week.

Besides the questionnaire, the interview was adopted as a complement to explore some of the findings in greater depth and elicit students' perceptions or opinions about learning engagement as well as their explanations of the initial questionnaire results. Among the 42 participants who have finished the questionnaire, six participants were voluntarily taken as interviewees. The interviews were conducted by QQ since the type of interview was a good way of producing rich written accounts without physical presence and saving much time transcribing verbatim audio recordings. On top of that, the interviewees can feel comfortable and relaxed because they have enough time to write, review and edit their answers before sending them. The method was complementary in the research to enhance the reliability of the research results.

4. Results and discussion

The section discusses the data collected from questionnaires and interviews in relation to the research questions specified in 3.1. The section includes two main parts: analysis of the data generated from the questionnaires in terms of four aspects, namely, behavioral, emotional, cognitive and social engagement and analysis of the feedback from the voluntary interviewees. To simplify the dataset and reduce its dimensionality while retaining as much important information from the original data as possible, this study employed principal component analysis (PCA). The Cronbach's alpha values for the four dimensions of engagement varied between 0.75 and 0.87, indicating a strong level of internal consistency and reliability.

Table 1 Descriptive analysis of behavioral engagement

Behavioral engagement	Themes	Mean	SD
Online engagement scale items			
1. I logged in to the course regularly.	Attendance	4.23	0.72
2. I respected each other's ideas.	Conduct	4.06	0.85
3. I actively took part in discussion.	Participation	3.81	1.15

4. I actively sought answers to the questions I met.	Effort and time on task	3.66	1.02
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5. I spent time after class reviewing and consolidating what I have learned.	Effort and time on task	3.98	0.95
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In this study, behavioral engagement is examined in terms of attendance, conduct, participation and effort and time spent on task occurring during the semester. As shown in Table 1, the highest mean score ($M = 4.23$, $SD = 0.72$) is the first item, indicating strong compliance with basic participation requirements. This finding suggests that students generally maintain consistent contact with the learning management system, which serves as a foundation for other forms of engagement. Students took part in the online activities extensively. The flexibility and mobility of the online platform encourages students' participation. The result is consistent with the observation of Ellis et al.^[45] learning by doing. Even silent observers might benefit from other peers' interaction when they engage in active listening or formulate thoughts. Item 2 also scores relatively high ($M=4.06$), reflecting positive social dynamics within the online learning community. Student A explains that "small group tasks were associated by all participating students with higher participation and effort". And student C reports that, during the online discussion, "everyone talks, and we feel very relaxed, with no pressure". However, more active forms of participation, particularly in discussion forums ($M=3.81$), shows lower engagement levels, potentially indicating barriers to meaningful interaction in asynchronous learning environments. The items regarding effort and time that students put on online tasks (actively seeking answers $M=3.66$, $SD=1.02$; post-class review $M=3.98$, $SD=0.95$) reveal an important distinction between compliance behaviors and deep engagement. The higher mean for reviewing suggests students prioritize consolidation of known material over exploratory behaviors like question-seeking because the latter needs more substantial motivational scaffolding.

An engagement hierarchy is suggested : learning system (highest) → social dynamics→review → interactive discourse → inquiry behaviors (lowest). This pattern reflects known challenges in transitioning from passive to active online learning. The consistency in SD implies these are systemic characteristics of online learning rather than course-related phenomena. The possible reasons why the mean score of item 5 is slightly higher than that of item 4 come from compliant behavior and deep engagement, the former referring to superficial adherence to some requirements and demands without internalization (for example, student C mentions that he reviews the PPT uploaded by the teacher every week because some of the final exam items come from them) and the latter representing a sustained state of active, volitional involvement driven by intrinsic interest and emotional connection^[13].

Table 2 Descriptive analysis of cognitive engagement

Cognitive engagement	Themes	Mean	SD
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Online engagement scale items

6. I reflected on my learning outcomes.	Meta-cognitive strategies	3.92	0.89
7. I focused on the understanding of linguistic knowledge.	Cognitive strategies	4.45	0.65
8. I formed my opinions based on what I have learned.	Meta-cognitive strategies	3.79	1.12
9. I made learning plans on my own.	Immersion	4.01	0.82
10. When I had troubles, I went over it until I understood it.	Cognitive curiosity	3.83	1.05

According to the results in Table 2, the item measuring students' cognitive strategy (e.g. focus on understanding linguistic knowledge) gets the highest mean score ($M = 4.45$), indicating that students prioritized comprehension of domain-specific content in their learning process and strong consensus in this basic cognitive strategy. This strong performance suggests that mastery of linguistic knowledge remains a central focus in digital education contexts. The obvious dedication of Chinese English learners to the acquisition of linguistic knowledge across both online and offline learning environment may be resulted from China's distinctive English education paradigm and prioritization of explicit knowledge accumulation^{[2][16][29]}.

However, the items regarding the measurement of students' meta-cognitive strategies show moderate yet meaningful engagement levels, including reflection on learning outcomes and formation of personal ideas based on learned knowledge with mean scores 3.92 and 3.79 respectively. These scores reveal that while students engaged in some thinking activities, there remained room for improvement in fostering deeper reflective practices. The substantial SD in opinion formation indicates that there existed a significant disparity in students' critical thinking abilities and knowledge construction abilities, suggesting a polarization of skills among the subjects. The mean score of item 9 is 4.01, which demonstrates that students tended to have strong planning skills. Yet, item 10 ($M=3.83$, $SD=1.05$) shows wider dispersion of persistence in overcoming learning difficulties, potentially reflecting differences in academic resilience or problem-solving confidence.

Table 3 Descriptive analysis of emotional engagement

Emotional engagement	Themes	Mean	SD
Online engagement scale items			
11. I was full of motivation to learn.	Motivation	4.21	0.66
12. I was quite interested in the themes of the texts.	Enjoyment	4.42	0.57

13. I sought guidance and support from the teacher timely when I have problems and I felt happy about it.	Instructor comforts students	4.56	0.53
14. I felt more confident and less shy when discussing online with my peers or/and teachers.	Emotional safety	4.36	0.68
15. I was willing to share learning experiences with others and felt excited about it.	Excitement	4.45	0.58

In this study, emotional engagement covered the indicators of motivation, enjoyment, emotional safety, excitement and instructor's emotional support for students. The results shown in Table 3 indicate high levels of emotional engagement across the five dimensions ($M > 4.2$), with instructor's support scoring the highest ($M = 4.56$), suggesting students' emotional engagement can be significantly enhanced by positive teacher-student interactions, which is a predictor of students' learning performance and satisfaction and influenced by individual qualities such as self-efficacy ^[13]. From the high mean score, what can be seen is that teachers' guidance and support may influence students with lower self-efficacy in online activities by recognizing their abilities and offering timely feedback. Structured teacher support (e.g., goal clarity and affirmative feedback) increases participation among less proficient learners, especially in online settings where such students may tend to disengagement. Student F states that "I prefer to keep silent if the teacher does not give me immediate feedback". Therefore, teachers' scaffolding is of vital importance for online activities. In the online situation, instant and high frequency of feedback from teachers are always required, because the absence of face-to-face communication and asynchronous nature of digital communication heighten students' reliance on explicit instructional signals to maintain engagement and self-regulation.

Items 12, 14 and 15 are about positive emotions, such as excitement, enjoyment and sense of safety. Empirical studies consistently confirm that feelings play a critical part in learning, influencing learning and achievement. The mean scores of the three indicators were above 4.3, which were comparatively high. Positive emotions help to overcome language problems and encourage exploration. Four students mentioned that, at the very beginning of the semester, they felt anxious and nervous, but with their regular involvement in the activities and friendly interactions with the teacher and the peers, the negative emotions tended to vanish. Furthermore, all the six students reported that their enjoyment of the course impelled them to acquire the sense of safety and confidence although one student mentioned that being naturally introverted and reluctant to speak much in both physical and online classroom, but he was becoming more confident and trying to share opinions with peers.

The mean score for learning motivation ($M = 4.21$, $SD = 0.66$), while still indicating generally positive engagement, reflects a marginally lower level compared to other emotional engagement dimensions (e.g., enjoyment $M=4.42$, excitement $M=4.45$). This subtle discrepancy may be attributed to several theoretically-grounded factors, including 1) motivational decay over time; 2) trait motivation and state motivation; and 3) the timing of data collection. Students E mentioned "although the teacher may enrich the online learning and teaching activities by using a wealthy body of material, like short videos, accounts, and audios, my motivation for learning might vary from period to period. For example, tendency for fresh contents and formats is our human nature."

Table 4 Descriptive analysis of social engagement

Social engagement	Themes	Mean	SD
Online engagement scale items			
16. I actively communicated with peers in the group.	Building community	4.38	0.49
17. I thought group study helps to strengthen my sense of belonging.	Sense of belonging	4.15	0.57
18. I built strong connections with the peers in the group and became friends outside the class.	Developing relationships	3.98	0.62
19. I liked to be recognized because of winning.	Competition	4.04	0.60
20. I thought the interaction with the peers helps to improve my study.	Mobile social interaction	4.41	0.50

Social engagement at the level of the semester was examined in terms of building community, sense of belonging, relationship development, competition and mobile social interaction towards the language course. The results shown in table 4 demonstrated varying levels of engagement across different social constructs. Item 16 received a very high mean score ($M=4.38$, $SD=0.49$), indicating students' strong engagement in group activities. This aligns with Item 20's highest score ($M=4.41$, $SD=0.50$) regarding perceived academic benefits from peer interaction, supporting Vygotsky's social learning theory that active collaboration enhances learning outcomes. Item 17 ($M=4.15$, $SD=0.57$) showed that the students recognize the role of group study that plays in fostering belonging, though slightly less strongly than active communication (Item 16). This 0.23-point difference suggests that while students engage socially, the affective dimension may require more nurturing. Item 18's lower score ($M=3.98$, $SD=0.62$) revealed that developing friendships beyond academic contexts remains challenging. Item 19 ($M=4.04$, $SD=0.60$) indicates moderate appreciation for recognition, consistent with healthy competition literature^[39]. However, its lower score compared to cooperative items suggests that students prefer collaborative over competitive structures. The high mean score ($M = 4.41$, $SD = 0.50$) for item 20 suggests that students perceive social engagement via mobile platforms as a valuable contributor to their academic efforts. In addition, the strong agreement indicates that students render peer interactions as not only part and parcel of their learning strategy but also a tool for maintaining academic relationships. They are willing to invest time on these interactions because they expect to receive the improvement of learning outcomes.

5. Findings

5.1 Contributing factors of engagement

The main purpose of this study was to investigate what specific factors contribute to behavioral, emotional, cognitive and social engagement across the semester. This section covers four subsections, exploring the contributing factors concerning behavioral, cognitive, emotional and social engagements respectively. Besides that, the interrelationships among the four dimensions of engagement will be discussed in this study. For each dimension, these factors are clustered into two main categories derived from data analysis: intrapersonal factors and interpersonal factors.



Figure 1 Contributing factors of engagement

5.1.1 Intrapersonal factors

Personal interest, including excitement, enjoyment and safety, is an intrapersonal factor contributing to fluctuation of engagement during the course. The majority of students in the questionnaire an interview explicitly recognizes their positive emotions when using the online platforms. Student C says “Whenever a teacher posts an assignment on Chaoxing, I feel compelled to finish it immediately. On one hand, the satisfaction of earning points is fantastic; on the other, the points is really what i want to improve my daily-performance score.” And student E mentions that when the task is thought of as fun and enjoyable, it feels easy to do. Being driven by the sense of satisfaction and enjoyment, students tend to overcome language problems and explore more about the task-related information, suggesting that positive emotions are connected to a higher level of comfort with English-medium instruction.

Alongside personal interest, another intrapersonal factor is self-efficacy, indicating the interconnection between emotional engagement and behavioral engagement. Self-efficacy refers to an individual's perception, belief, or judgment of their ability to achieve a specific level of learning or task performance^[46]. A learner's emotional state and behavioral engagement are strongly influenced by this belief. When learners are confident in their ability to complete academic tasks, they are more motivated to take on challenging assignments and persist longer—both of which are crucial for academic success. The third factor mentioned by several students as contributing to sustaining their focus during the course is motivation. Students A, C and F say they feel motivated when using Chaoxing learning platform owing to its interactive nature, a wide range of available materials and user-friendly design.

5.1.2 Interpersonal factors

In educational settings, teachers play a crucial role as leaders not only in emotional expression and regulation but also in academic guidance. For example, during a challenging activity, a teacher may alleviate students' anxiety by remaining patient and showing concern, thus reducing their pressure and promoting their learning^[42]. Student B responds, "during an online discussion, i felt really stressed because i had no idea about how to answer effectively, and the teacher noticed my keeping silent and sent me several private messages to ask why. She broke the question into some smaller ones, which helped think more clearly. That patience made me feel less alone." Through emotional leadership, teachers create better educational outcomes by competently recognizing and addressing the emotional states of both themselves and their learners. Some research demonstrate that the teachers skilled at recognizing, interpreting, and regulating students' emotions play a significant role in higher education. Their ability to attune to students' emotional states actively supports both emotional and cognitive growth. This, in turn, promotes deeper engagement in learning, strengthens intrinsic motivation, and cultivates students' self-regulated learning competencies^{[40][47]}. Although the students and the teacher are apart physically, the teacher's consolation and guidance is critical for emotional support and feedback.

Peer interaction constitutes a critical pedagogical factor that significantly enhances learner engagement, complementing the role of teacher-provided emotional support. Interaction with peers can be understood as collaborative learning, which is defined as "group work, avoiding solo projects to achieve goals of common interest"^[14]. Peer interaction has some emotional implication that not only promote students' academic performance as they listen, read, convey and respect different ideas and beliefs but also strengthen the peer connection from students' organization and decision making. It is worthy of note that the teacher working as an activity designer and cooperative-environment creator helps to trigger motivation and involvement. Student E states, "I am introverted during the collaborative activities, but i like my quiet participation because it enabled me to know other students' characteristics and interest, which made me feel a sense of belonging."

5.2 Pedagogical suggestions

According to the above discussion and findings, learner engagement appears to emerge from dynamic combinations of intrapersonal and interpersonal factors including personal interest, self-efficacy, motivation, teachers' scaffolding, peer interaction and peer connection. The issue of how to effectively engage students online needs to be answered and explored. Based on these findings, it is advisable to strategically cultivate learner engagement by adopting a multidimensional instructional approach that addresses both intrapersonal and interpersonal dimensions.

Firstly, the autonomy-supportive environment should be fostered. Teachers should effectively design some activities or tasks to align with students' interests and personalities. For instance, in a unit entitled *A Dill Pickle*, students might select between watching videos about feminism, analyzing books like *A Room of One's Own* and *Life of Ma Parker*, and group discussion on-- As a lady, what can I say?, all while meeting the same learning objectives. Such interest-driven assignments trigger the psychological need for autonomy, while simultaneously increasing task value and relevance. Implementation should maintain clear academic standards while offering flexible pathways, such as permitting varied presentation formats (podcasts, written reports, or oral presentation) to accommodate diverse interests and strengths. Periodic reflection exercises can further strengthen the connection between personal interests and academic content, reinforcing intrinsic motivation cycles.

In addition, teacher scaffolding needs to be optimized. Effective instructional scaffolding represents a critical pedagogical approach for fostering meaningful engagement in learners.

Specifically, in this context, two scaffolding techniques can be employed to optimize learning engagement: differentiated questioning and process-oriented feedback. Taking the same unit *A Dill Pickle* as an example, teachers should systematically sequence questions to scaffold thinking processes from lower-order (remembering, understanding) to higher-order cognitive skills (analyzing, evaluating, creating). The process begins with foundational lower-order questions designed to establish textual understanding, such as identifying the setting of Vera and the man's encounter or listing symbolic objects in the café that reflect their past relationship. If students demonstrate solid comprehension through accurate responses, the questioning should naturally transition to middle-order thinking tasks that require deeper textual analysis and thematic connections. Students might be challenged to rewrite the story's ending from the man's perspective while carefully preserving Mansfield's distinctive narrative style, or to examine how the author employs flashback techniques to reveal the characters' emotional histories. The scaffolding culminates with higher-order questions that demand sophisticated critical judgment and creative synthesis. At this stage, students might evaluate the justification for Vera's abrupt departure, or conceptualize a modern film adaptation through storyboarding that visually captures the story's central themes.

Lastly, collaborative learning activities, central concepts to student-centered learning, can be challenging to implement in traditional large class lectures^{[48][49]}. Therefore, instructive teaching strategies must be used. However, the transition to online learning environments presents a unique opportunity to overcome these barriers. The relative anonymity and physical distance afforded by virtual classrooms effectively reduce students' anxiety about losing face, thereby creating more favorable conditions for peer interaction activities. For example, teachers can facilitate peer review workshops by requiring students to submit drafts of their assignments, such as essays or presentations, to an online platform. Peers are then assigned to review each other's work using structured rubrics or guided feedback forms to ensure constructive and focused critiques. Online learning environments provide unique advantages for collaborative activities by lowering social barriers and enabling flexible interaction formats. The strategies ranging from breakout discussions to gamified teamwork to role playing can enhance student engagement and foster deeper learning.

6. Conclusion

This study presents a nuanced understanding of engagement that extends beyond isolated tasks, revealing its multifaceted nature throughout the Comprehensive English 2 course. The findings demonstrate that engagement operates not merely as a learning outcome but as a complicated construct that both affects and is affected by instructional approaches, social dynamics, and individual learner characteristics. The investigation further uncovers that engagement manifests distinct patterns depending on the analytical lens employed, with intriguing parallels observed between intrapersonal factors (like personal interests and self-efficacy) and interpersonal elements (such as teacher support and peer interaction) throughout the semester, suggesting a fractal pattern in engagement processes at the course level. The incorporation of students' perspectives and experience provides unique insights into engagement aspects that conventional observation methods might overlook.

From a pedagogical standpoint, the study yields several important implications. Results underscore the interdependent roles of behavioral, cognitive, emotional, and social engagement in sustaining learner attention during instructional activities. Echoing Turuk's^[50] perspective on teachers creating developmental learning contexts, educators should carefully consider learners' Zone of Proximal Development to deliver appropriate scaffolding that advances their competencies.

The research additionally indicates that incorporating brief, diverse tasks during lessons can effectively maintain multidimensional engagement by offering achievable short-term objectives. Importantly, successful task completion not only reinforces learners' self-efficacy but also provides timely progress feedback. As the findings suggest, optimal online task design requires alignment with student learning objectives, with explicit instructor guidance on how activities contribute to goal attainment.

This investigation makes significant contributions by offering empirical evidence about effective engagement practices and practical strategies for sustaining engagement throughout a course. Moreover, it advances our comprehension of the intricate dynamics surrounding engagement in digital learning environments, particularly highlighting how its various dimensions interact and evolve in online instructional settings. The study's methodological approach, combining systematic analysis with learner perspectives, yields novel understandings about the complex ecosystem of student engagement.

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