



# Impact of Online Learning Interactive Experience on Language Learners' Emotional Engagement

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## Abstract

Students' emotional engagement in the context of second language and foreign language classrooms can be seen as a multidimensional construct to include cognitive, behavioral, social, and emotional dimensions of engagement. In Applied linguistics research, however, the term "engagement" is shared intuitively and optimally for language learning. The aim of this study was to take a step forward and investigate the extent of emotional engagement in online learning environments, and whether such emotional engagement can be used as a quantitative indicator to measure the degree of students' emotional engagement in behavioral, cognitive and social interaction among language learners. The study employed a mixed method research design, with data collected through literature research, questionnaire survey, and in-depth interviews. The findings of the study revealed that online learning interactive experience was significantly and positively correlated with language learners' emotional engagement, particularly due to its ease of use, interactive content, and design. The study also found that the online learning experience indirectly affected emotional engagement by increasing students' motivation and interest in learning. Finally, the study also found factors such as gender, grade level and subject influencing the relationship between the interactive online learning experience and emotional engagement. These findings reveal the positive impact of online learning interactive experiences on language learners' emotional engagement and highlight the mediating role of motivation and interest in learning. The study recommends devising such strategies that enhance language students' learning engagement in online learning environments and facilitate their participation in the learning process. These findings have implications in the form of improvement of language learners' learning experience and emotional engagement, which can also enhance their academic performance.

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**Keywords:** Online Learning, Interactive Experience, Emotional Engagement, Test Analysis, Educational Strategies.

## introduction

In foreign language (FL) or second language (L2) settings, language learners' emotional engagement is closely intertwined with the language ideologies, as FL or SL learning experience takes the learners into a

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complex, dynamic and reciprocal relationship (Barcelos et al., 2022; Sung, 2022). The emotional engagement also refers to a state of heightened attention and involvement, in which participation is reflected in a multi-faceted fashion, not only in the cognitive dimension, but in social, behavioral, and affective dimensions as well (Fredricks et al., 2004). Such “multidimensional” constructs namely cognitive, behavioral, and emotional, are considered as instructed language learning components in applied linguistics. Each of these constructs can be examined in isolation, in the context of instructional language learning, where each construct should be foregrounded as a dimension of engagement (Svalberg, 2009). With the rapid development of Internet technology, online learning has become an integral part of modern university education. The openness and interactivity of online learning has created a lot of platforms for social and emotional engagements, bringing a paradigm shift in instructional language learning.

When the pandemic hit the education sector worldwide, a lack of conceptual models from a linguistic perspective was felt, particularly to apply in online learning environments. A need was felt for more domain-specific models of language teacher interaction and language learners’ emotional attachment to language learning. White (2018) had analyzed the need for emotional turn in applied linguistics and TESOL, but it required emotional engagement of both the language teacher and the language learner. Such engagements require language teachers’ professional and social engagement, while it requires cognitive, emotional and behavioral engagements of the language learners. However, the interaction between the emotional engagements of both the language teachers and language learners requires further attention and research, in order to understand their affective engagement in an emotionally demanding learning environment like online learning.

Therefore, it is of great significance to study the level of language learners, cognitive and emotional engagement in online learning environments. This study aimed to examine a specific online instructional setting with language learning goals assigned to a given class and age group and monitor their learning activities to understand the importance of emotional engagement in the specific setting of language learning. A need was also felt to conduct a study on emotional engagement as the fields of applied linguistics have increasingly recognized the limitations of purely cognitive and affective approaches to language learning, particularly in socially and emotionally restrained environments. The study examined the online learning interactive experience of L2 learners’ affective engagement and explored the role of constructs like motivation, academic interests, and individual characteristics. The main objective of this study was to provide useful insights for the enhancement of language learners’ academic achievement and academic satisfaction through online learning platforms. It also explored the factors affecting language learners’ commitment to learning in online learning environments, and provided strategies to solve their problem, realizing the need for talent cultivation, providing new ideas, new perspectives and new methods.

## Literature Review

A number of researchers (Moranski & Toth, 2016; Sato, 2017; Sato & Ballinger, 2016) have suggested that learners are likely to be more effective in language learning when they are emotionally and socially engaged and interactive. By social and emotional engagement, they are better interactive listeners, they share each other’s expertise and ideas, and provide feedback to one another (Toth & Moranski, 2018), which are indicative of cognitive, social, and behavioral dimensions of social and emotional engagement (Moranski et al., 2016). Moreover, such an interactive learning environment ideally suits the learning goals and processes of language learning. Another study stressed upon social and emotional engagement as a prerequisite for second language acquisition (SLA) (Swain & Lapkin, 2013), because by means of operationalizing engagement language learners can focus on language form, meaning, and use. Social engagement, additionally, provides them the opportunity of social interaction for language practice.

Online learning has become an integral part of modern university education and is rapidly coming into its own as Internet technology continues to evolve (Almusharraf, 2022). Online learning not only provides students with more learning resources and flexibility, but also provides educators with innovative teaching and learning methods (Al-Obaydi et al., 2023). The relationship between students’ affective engagement and academic achievement in online learning environments has been of great interest to scholars. Previous studies have shown that there is a positive correlation between students’ affective engagement and their academic achievement. This means that students with higher emotional engagement usually achieve better academic results. In traditional classroom environments, teacher-student interactions, peer interactions, and face-to-face interactions usually help to increase students’ emotional engagement, which positively impacts academic performance (Brooks & Young, 2015). In addition to online learning platforms and interactions, student motivation and academic interest may also play a key role in online learning environments (Chacon et al., 2023). Students’ motivation is positively correlated with their affective engagement, and students who are

highly motivated to learn autonomously are more likely to show positive affective engagement. In addition, academic interest may also influence students' affective engagement, as interest in course content is often associated with a positive affective experience.

However, in this digital age, the question of how to fully engage students in online learning and achieve good academic outcomes has become a critical one. Online learning typically involves more independent learning and less face-to-face interaction, which may affect students' level of affective engagement (Chen et al., 2023). Studies have found that students' affective engagement is typically lower in online learning and that academic performance may be negatively impacted. Therefore, it becomes particularly important to examine how online learning interaction experiences affect students' affective engagement (Cheng & Xie, 2021). Students' affective engagement plays a crucial role in this process, influencing their academic achievement, academic satisfaction, and academic success. Therefore, the purpose of this study was to examine the impact of online learning interactive experiences on college students' affective engagement (Cho & Cho, 2014). Student affective engagement is a positive experience in the learning process, which usually includes commitment, interest, and pleasure in the learning task, as well as emotional experiences related to the learning task. Emotional engagement helps students engage more deeply in academic activities, stimulates their passion for learning, and improves learning outcomes (Fute et al., 2023).

With the popularity of online learning, second language and foreign language practitioners are increasingly concerned about students' emotional engagement in online learning environments. Several studies have begun to explore emotional engagement in online learning environments. Students' satisfaction with online learning platforms is correlated with their affective engagement, with students with higher satisfaction typically showing more positive affective engagement (Gao et al., 2021). This emphasizes the importance of the design of an online learning platform on affective engagement. In addition, both social and academic interactions in online learning have a significant impact on students' affective engagement (Huang et al., 2023). Educators should promote academic and social interactions in online learning to increase students' affective engagement. Despite a range of appealing features of online learning, including openness, interactivity, and resourcefulness, student affective engagement continues to face challenges (Jenkins & Jeske, 2017). A key issue is whether language learners in online learning environments are able to integrate into L2/FL learning, participate fully, and demonstrate a high level of emotional engagement.

Online learning is gradually formed with the development of computer network technology, multimedia technology, etc., and is an important dimension of process evaluation. Due to the characteristics of time and space separation between teachers and students in the online learning environment, it is difficult for teachers to grasp the students' learning engagement (Wang, 2022). Ye et al. (2023) also discuss other issues like the need to find a clear definition of the concept of emotional engagement, improvement of measurement tools, establishment of theoretical models, and the use of research methods of intervention research. Although many students choose online learning because of its flexibility and convenience, online learning can also lead to feelings of isolation, lack of social interaction, and faculty-student interaction (Kuo et al., 2021). These factors may negatively impact students' emotional engagement and decrease their academic satisfaction. Research has found that students' emotional engagement is closely related to their academic achievement (Li et al., 2022). When students show higher emotional engagement in learning tasks, they are more likely to achieve better academic outcomes. Therefore, it becomes particularly important to understand how the online learning interaction experience affects students' affective engagement.

The shortcomings of research have also been hinted such as lack of comprehensive empirical studies, lack of research on the relationship between students' behavior, cognition, and emotional engagement, and the lack of a systematic architecture. This requires adopting a multidimensional psychological structure perspective to study the degree of emotional engagement and requires special attention to the behavioral, cognitive, and affective aspects of students. Despite the fact that affective engagement is critical to the success of online learning, research on how online learning interactive experiences affect affective engagement is relatively limited (Lungu & Sun, 2016).

The current study aimed to fill this gap in this field of research, and through literature review, questionnaire survey, and in-depth interviews, explored the relationship between online learning interactive experience and language learners' affective engagement, in order to provide empirical evidence for the role of online learning platforms in enhancing the linguistic competence. Factors such as gender, grade level and subject area may also have an impact between online learning interactive experience and emotional engagement. For example, gender differences may lead to differences in online learning interaction experiences and affective engagement between male and female students (Robertson et al., 2022). It was found that male and female students may have different needs and experiences in online learning, which may affect their affective engagement. Grade level and subject area may also be influential factors, as students in

different grade levels and subject areas may have different expectations and experiences with online learning. In summary, although the popularity of online learning has provided students with more learning opportunities, there are still challenges to students' affective engagement in online learning environments.

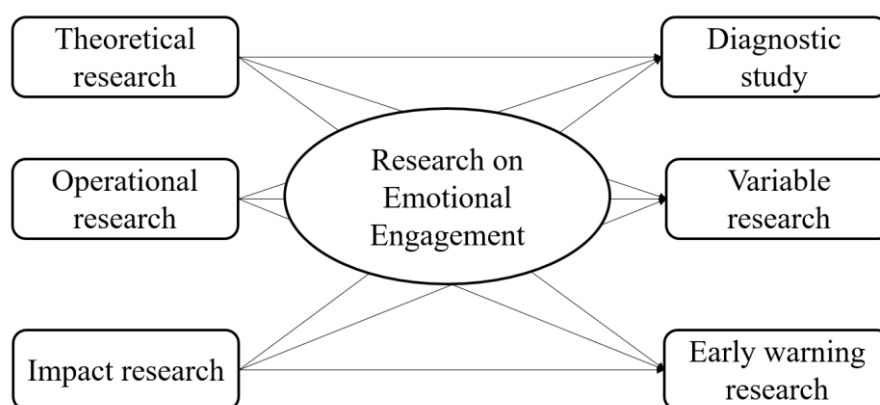
The purpose of this study was to delve into how the online learning interactive experience affects language learners' emotional engagement and to explore the role of motivation, academic interests, and individual characteristics in this context. Through this study, we hope to provide useful insights for the improvement of online learning platforms, the development of educational policies, and educational innovations that can enhance college students' academic achievement and academic satisfaction.

## Theoretical Framework and Research Methodology

### *Research Design and Theoretical Framework*

This study used a mixed method research design, by combining qualitative and quantitative research methods. The subjective factors were quantified to examine the empirical research and the quantitative findings, and qualitative research were used to triangulate the findings of the quantitative phase. This type of research deepens the understanding of online learning input theory, and provides a scientific basis for enhancing the online learning input of language learners, and enriches and develops the related research of learning input theory in online learning environment. Learning input research originated from learning input theory at the earliest time, and through the research on the status quo and influencing factors of language learners' learning input in the online learning environment, it can expand the connotation of learning input theory and enrich the outreach field of its research (Singh & Meena, 2023).

The current status of the research framework of language learners' emotional input is shown in Figure 1. This framework can be utilized to study the high level of emotional engagement of language learners in an online learning environment promoting a sense of self-efficacy and increasing their higher-order thinking ability (Sun et al., 2023).



**Figure 1:** Current Status of Research on Emotional Engagement of College Students.

In the context of this research framework, this study diagnosed the learning development path and psychological development characteristics of language learners by designing a questionnaire on online learning engagement and influencing factors and enriched the relevant measurement methods on the basis of the original measurement questionnaire. The questionnaire followed the theoretical research guidelines.

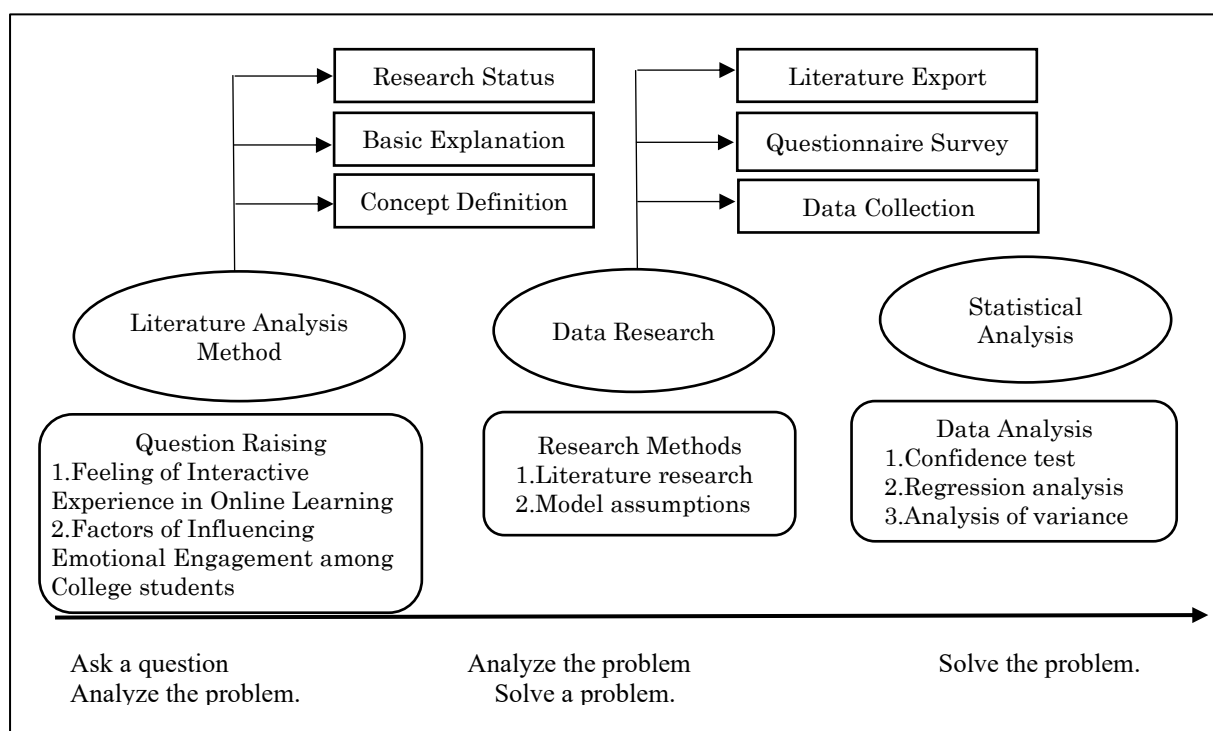
### *Data Collection*

The data for this study was collected through a number of methods like literature search, questionnaire survey method, and Interview method. The literature or documentation research was done from authoritative periodical databases such as core collection of Web of Science databases and Chinese journal database "China Knowledge Network", which provided a comprehensive theoretical basis for this study. These databases facilitated to carry out literature analysis of the current state of online learning, language learners' learning input status and influencing factors, enhancement mechanisms and measurement tools. They also provided scientific and reasonable theories for the definition of the concepts of the study, theoretical basis, theory and model construction.

A questionnaire survey method is a structured survey method for quantitative research on subjective factors, which is best suited for collecting data of wide survey scope, high degree of standardization, and ease of editing of acquired data. The data for this study was collected through a customized questionnaire

distributed to college students' who were exposed to language learning through online learning methods. The questionnaire aimed to survey the status of college students' commitment to online learning in colleges and universities across the country. The interview method, as the name suggests, is a method in which the researcher "searches" or "visits" the informants and carries out a research study by "talking" and "asking" questions. Interviewing is a communication activity of a research nature, in which the researcher's active questioning and the informants' true expression are used to construct the meaning of the research problem. Semi structured interviews were conducted with language teachers and a few language learners to understand the extent to which efforts are being made to ensure learners' emotional engagement in language learning through online methods. The interview method also aimed to collect firsthand experience about the impact of online learning interactive experience of language learners' emotional engagement.

Figure 2 presents this impact graphically showing the degree of learning engagement, the influencing factors, the measurement of the degree of learning engagement, and the research on the strategy for improving the degree of learning engagement.



**Figure 2:** Research Process on The Impact of Online Learning Interaction Experience on College Students' Emotional Engagement.

### Data Analysis

As exhibited in Figure 2, a statistical analysis method was used by employing SPSS 23.0 to process the raw data obtained from the questionnaire and to obtain valid data. SPSS statistical data software is mainly used for the test of sample reliability and validity, descriptive statistics, and correlation analysis and multivariate regression analysis between each variable, and so on. Through statistical analysis of the questionnaire data, it reveals the learning behavior patterns, trends and potential interfering factors in online courses, which helps to optimize learning, self-assessment, self-diagnosis and early warning, improve the accuracy of students' online learning, and ultimately achieve the learning goals.

## Results and Discussion

### Learners' Emotional Interaction and Emotional Engagement Relationships

"Emotional engagement" and "emotional involvement" are subject keywords to identify research variables in various databases. In recent years, there are different version of these variables such as "student engagement", "student involvement" and "study engagement," which makes research in this area diverse and complex (Wolters et al., 2023). Figure 3 depicts various hotspots assigned to degree of emotional engagement in the field of school education including school environment, family environment, social environment and education policy (Xu et al., 2023).



|                    |                      |                    |                    |
|--------------------|----------------------|--------------------|--------------------|
| Education policy   | 0.58106              | 0.67964            | 0.45169            |
| Social environment | 0.0048               | 0.9331             | 0.50233            |
| Family environment | 0.35161              | 0.24288            | 0.13265            |
| School environment | 0.70073              | 0.6392             | 0.71354            |
|                    | Emotional engagement | Emotional distress | Emotional learning |

**Figure 3:** Research Assignment Hotspots for The Degree of Emotional Engagement.

Source: Xu et al. (2023).

There are diverse understandings of the concept of “emotional engagement”. One viewpoint sees emotional engagement as an active and individualized curriculum experience that requires an anthropological approach to study emotionally engaged and unengaged curriculum experiences. Another perspective views emotional engagement as a psychological activity that centers on students' behavioral engagement and examines the role of this variable and its relationship to other instructional variables. Synthesizing the findings, emotional engagement has been categorized into three dimensions: behavioral engagement, cognitive engagement, and affective engagement (Yan et al., 2022). In addition, studies have also interpreted the origins of the degree of emotional engagement from different perspectives, namely emotional engagement, emotional distress and emotional learning. as shown in Figure 3, which are relatively independent dimensions and are used to rate the degree of measurement of emotional engagement. This three-dimensional model is often seen as the influence mechanism of the degree of emotional engagement of language learners from a holistic perspective.

#### *Emotional Engagement Online Environments*

The conceptual and theoretical research on the degree of emotional engagement has also made some progress in online learning environments, specifically for L21/FL learning. There are several emotional engagement models that emphasize the importance of how language (SL/FL) learners should focus on the online course content. These models relate to behavioral engagement, cognitive engagement, and affective engagement, which not only focus on the definition and measurement of emotional engagement, but also cover a variety of theoretical frameworks and perspectives to gain a deeper understanding of the nature of emotional engagement and the factors that influence it.

When language learners actively participate in emotional engagement activities in online environments, their behavior can be directly observed. By means of affective engagement, the students internalize the emotional content as per their own needs, and invest themselves socially, cognitively and emotionally in affective activities before making conscious decisions. Online affective engagement thus is the process by which learners enter into engagement and maintain relationships with others, including online and offline affective behaviors, course communication, evaluative thinking, self-perception, and social identity.

#### *The Mediating Role of Affective Motivation and Academic Interest*

The mediating role of emotional motivation and academic interest was first proposed by the famous Swiss psychologist Piaget, who believed that human knowledge is neither objectively obtained nor subjectively, but it is the conclusion of the individual's participation in the role of the environment, which is gradually constructed (Cheng et al., 2021). Later on, this theory has been continuously improved under the impetus of Vygotsky's zone of proximal development (Silalahi, 2019). Computer network technology, multimedia technology and other information technology widely support the gradual development of these theories, which also agree with the students' mobility and subjectivity, and emphasizes that students are involved in the emotional process of continuous construction of knowledge and meaning. These theories postulate that the emotional environment can be made up of "context", "collaboration", "conversation" and "meaning construction" and that knowledge can be acquired through meaning construction in the affective process.

While applying these theories, it is evident that students' affective engagement consists of two main components: behavioral engagement and emotional engagement, which form a cyclical process for the products of school experience and academic achievement over time. These two components are a longtime accumulation of students to produce successful performance such as academic achievement, language literacy and formation of the correct outlook on life, values and worldview, which is reflected in their satisfaction feedback. Figure 4 exhibits satisfaction factors of affective motivation and academic interest, where A is the self-factor, B is the teacher-factor, C is the peer-factor, D is the environment-factor. Among the variables, a is the gender, b is the grade level, c is the subject matter experience, and d is the experience of the student leaders.

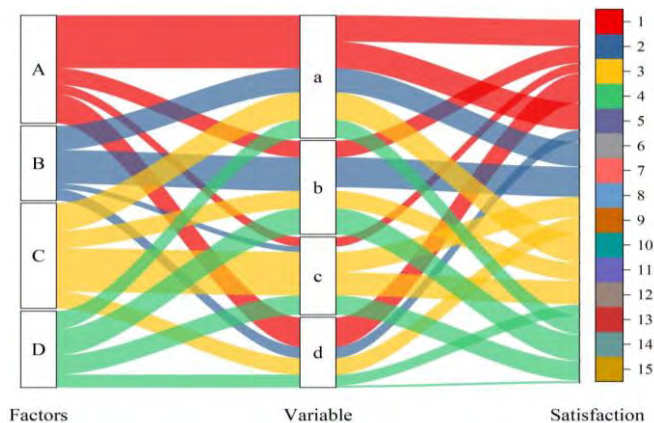


Figure 4: Satisfaction Study on the Factors and Variables.

*Analysis of Influencing Factors of Emotional and Behavioral Engagement*

In the dimension of behavioral engagement, the order of influence on behavioral engagement was found to be following: self-factor ( $t=4.690, p=0.002$ ), teacher factor ( $t=1.975, p=0.049$ ), and environmental factor ( $t=2.795, p=0.006$ ), while peer factor had no significant impact on students' behavioral engagement. Behavioral engagement focuses on the external performance of college students in online emotional activities, including the amount of time invested, the intensity of the activity, and the level of effort put in. It also focuses on the emotions, whether emotional requirements are fulfilled, and emotional achievements are achieved by the participants. When engaging in online learning, students have a stronger emotional desire and motivation, and are proficient in using technology on online platforms. The more actively they are able to integrate into the online environment, and the more time and effort they devote to learning, the higher is their level of behavioral engagement.

As the leader of teaching activities, teachers have a stronger ability to use information-based teaching tools, allocate teaching resources, choose teaching methods and strategies in a reasonable manner. They can optimize teaching design and guide students to actively participate in online courses. External conditions such as ease of use of tools and availability of resources in online emotional environments can promote students' behavioral engagement. The main influencing factors of emotional and behavioral engagement among college students are shown in Figure 5.

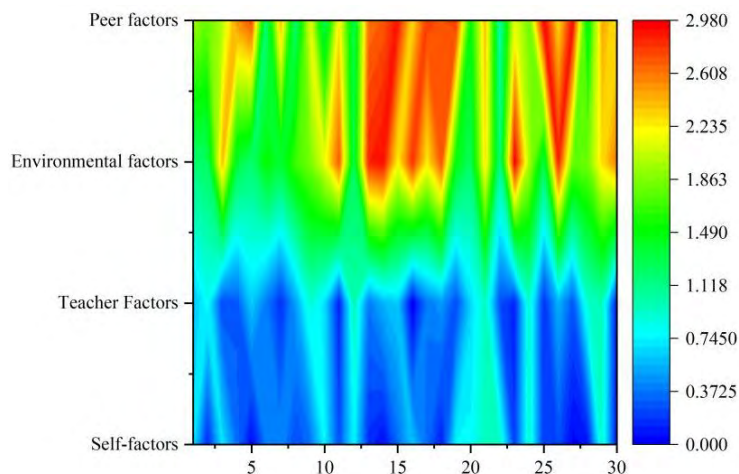
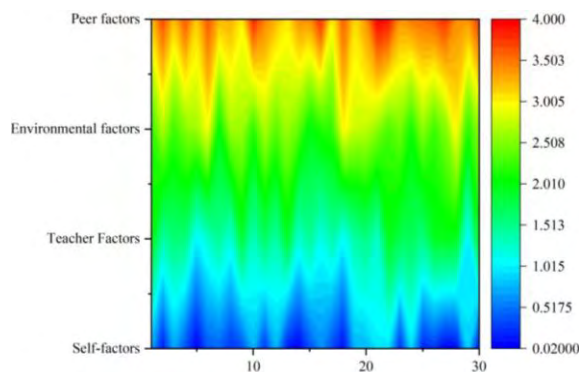


Figure 5: Proportion of Main Influencing Factors on Emotional and Behavioral Engagement Among College Students.

### *Analysis of Influencing Factors of Emotional and Cognitive Engagement*

In the dimension of cognitive engagement, the factors ranked according to the strength of their impact on cognitive engagement are: self-factors ( $t=7.848$ ,  $p=0.048$ ) and teacher factors ( $t=9.422$ ,  $p=0.032$ ), peer and environmental factors did not have a significant impact on cognitive engagement. Cognitive engagement mainly focuses on the methods and strategies used by individuals to achieve emotional goals, as well as the monitoring and regulation of the entire online emotional activity. Attention is paid to the metacognitive and deep cognitive strategies of college students in the online emotional process. The main influencing factors of college students' emotional cognitive engagement are shown in Figure 6, highlighting the cognitive engagement among college students.

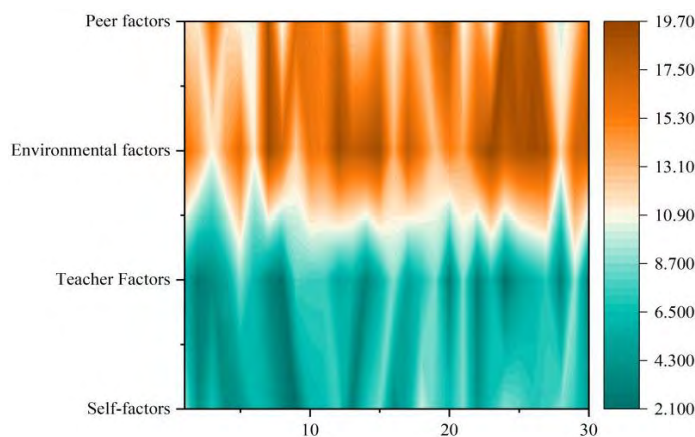


**Figure 6:** *The Proportion of Main Influencing Factors on Emotional and Cognitive Engagement Among College Students.*

Participation in emotions cannot be separated from their strong motivation, appropriate emotional strategy selection, and the teacher's regulation of emotional processes in online emotional platforms. Figure 6 clearly depicts "peer factors" and "environmental factors" having no significant impact on the cognitive engagement of emotional individuals. It is because of live streaming teaching platforms which are mainly teacher centered, having no interaction between teachers and students, and also lacking corresponding peer interaction. Although such online emotional platforms are simple and easy to use, and also easy for students to master, but they weaken the significant impact of peer and environmental factors.

### *Analysis of Influencing Factors of Emotional and Social Engagement*

In the dimension of social engagement, the order of influence varies thus: self-factor ( $t=8.229$ ,  $p=0.003$ ) and peer factor ( $t=8.323$ ,  $p=0.012$ ), while teacher factor and environmental factor had no significant impact on social engagement. Social engagement consists of the interaction investment between teacher and student, student and student, and student and teaching resources. Feedback communication takes place between teachers and students, peer participation and mutual evaluation, which portrays the extent to which collaborative emotions, resources and experiences are shared among students. In an online environment, the support and pressure from peers when emotional participants participate in course emotions can affect their level of engagement. Similarly, when self-efficacy and cognitive load are higher, their peers provide more support, and they engage in more social interactions in their emotions. Figure 7 is the graphic presentation of the influencing factors of emotional and social engagement among college students.

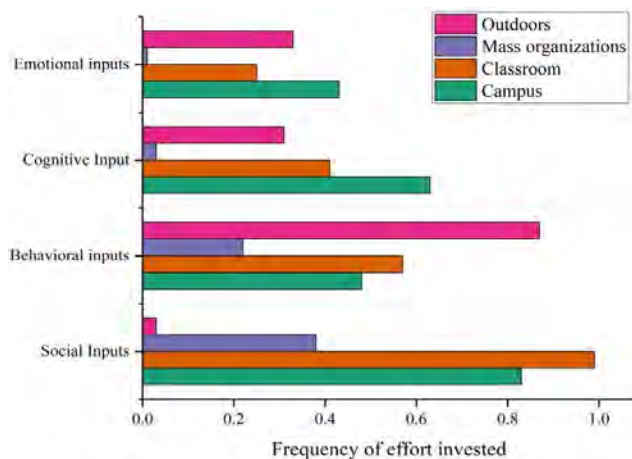


**Figure 7:** *Proportion of Main Influencing Factors on Emotional and Social Engagement Among College Students.*



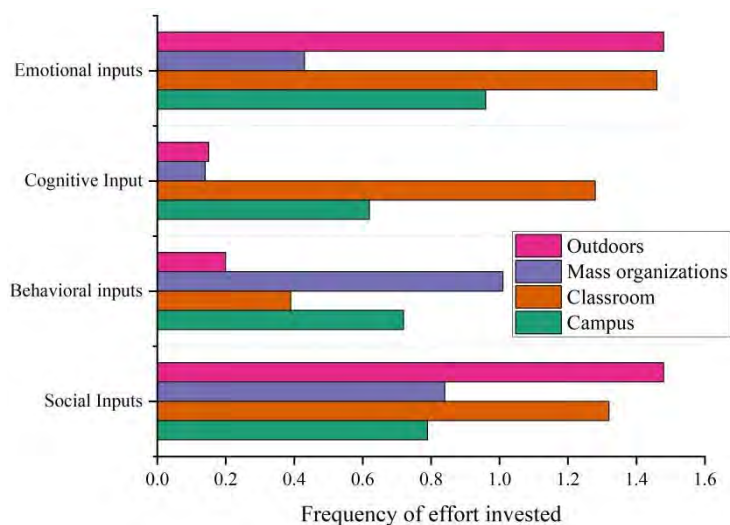
*Analysis of Emotional Engagement Among Genders*

A lot of differences were seen in the degree of emotional engagement between male and female genders in online language learning., which was slightly higher for males than for females (3.5>3.43), and there was no significant difference (p>0.05). Figure 8 exhibits the frequency of social, behavioral, cognitive, and emotional engagement among male students' online learning interactions in activities outdoors, with mass organizations, in classrooms and campuses.



**Figure 8:** Frequency of Emotional Engagement of Males During Online Learning Interactions.

Likewise, Figure 9 shows the frequency of social, behavioral, cognitive, and emotional engagement among female students' online learning engagements carried out in activities outdoors, with mass organizations, in classrooms and campuses. Both the analyses show that gender has no significant effect on the level of emotional engagement of language learners in an online environment as shown in their activities outdoors, with mass organizations, in classrooms and campuses.



**Figure 9:** Frequency of Emotional Engagement of Females During Online Learning Interactions.

*Analysis of Emotional Engagement for Grade Level and Subject Area*

Students' grade level and subject area are two important aspects of college students' lives, as they play different roles in college students' emotional engagement. The level of emotional engagement helps to analyze the effects of grade level and subject area work on college students' emotional engagement, with a special focus on the differences between them. The results of the study show that both grade level and subject area have an impact on college students' emotional engagement, but there are differences in the factors affecting them. First, online affectivity provides college students with more flexible emotional engagement opportunities, enabling them to be emotionally available at any place and time. This convenience helps to increase students' emotional engagement because they are better able to adapt to their emotional habits and rhythms.

However, online affect can also lead to feelings of isolation and social isolation as students interact less with peers and faculty in the virtual environment. As a result, emotional engagement is challenged in online

affectivity. In contrast, student leaders' work emphasizes teamwork and social interaction, providing opportunities for college students to participate in a variety of activities and organizations. This contributes to greater affective engagement as students are able to build more relationships, develop leadership skills, and feel a sense of belonging to a community.

## Conclusion

The findings of the study made evident the impact of online learning environment on language learners' emotional engagement experience. Right at the outset, it was found that language learners in online environments have a reasonably good level of emotional engagement, with higher levels of behavioral, cognitive, and social interaction. This level of emotional engagement can be increased through factors like self-factors, teacher factors, peer factors, and environmental factors, focusing on improving language learners' and emotional engagement. Therefore, in carrying out course teaching in this environment, it is necessary to enhance the support level of oneself, teachers, peers, and the environment. This is possible through providing targeted course resources and emotional support, improving the construction of teaching platforms, creating a positive and upward emotional atmosphere, and enhancing the emotional interest of emotional learners, and meeting emotional needs.

The study also focused on the quality of learning platforms and teaching resources. Analyzing the purpose of online learning, it was found that language learners who engaged in emotional engagements and achieved professional skill improvement had the highest response rates, indicating that these learners rightly chose online platforms to meet their own needs. Therefore, the study suggests that online platforms meet the emotional engagement needs of language learners which is an important factor affecting the online emotional engagement of language learners.

Last, but not the least, the study also found that the interactive behavior of language learners over the online learning environments can effectively promote their active participation in L2/FL learning courses. For this purpose, teachers should encourage students to participate in online collaborative discussions and promote teacher-student as well as student-student interaction. For example, emotional engagement can be developed by fully utilizing the functions of forums or message boards, encouraging students to actively ask and solve problems, and promoting effective emotions. At the same time, teachers can guide students to conduct peer evaluation and self-evaluation, promote collaborative knowledge construction between teachers and students and between students, form an emotional community, improve emotional autonomy and enthusiasm, and enhance online emotional engagement.

The study recommends devising such strategies that enhance language students' learning engagement in online learning environments during pandemics, and facilitate their more effective participation in the learning process. These findings have implications in the form of improvement of language learners' learning experience and emotional engagement, which can enhance their academic performance, promote online learning platform, and improve the quality of education.

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