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Examining the Complexity between Boredom and Engagement in English Learning: Evidence from Chinese High School Students

Honggang Liu [1], Jing Li [2] and Fan Fang [3,*]

[1] School of Foreign Languages, Soochow University, Suzhou 215006, China
[2] Shenyang Shangpindongjia School, Shenyang 110041, China
[3] College of Liberal Arts, Shantou University, Shantou 515063, China
* Correspondence: ffang@stu.edu.cn

Abstract: Although boredom is a negative emotion that students frequently experience in the process of learning English, boredom in language learning has received scant research attention in terms of its structure, levels and impact on language learning engagement. To fill this gap, the study focused on data obtained from 1157 high school students in six different areas of mainland China via a questionnaire. Exploratory factor analysis revealed a binary structure of English learning boredom (ELB) and a tri-structure of English learning engagement (ELE). The Pearson correlation showed a low-to-moderate correlation between ELB and ELE. On the basis of our results, we present this study's pedagogical implications.

Keywords: English learning boredom; English learning engagement; relationship; complexity; Chinese high school students

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1. Introduction

Language learner psychology has been researched for decades in the field of second language acquisition (SLA) and is undergoing an emotional turn [1,2], with a wealth of research targeting positive emotions, such as flow [3] and enjoyment [4,5]. However, boredom, a negative emotion that causes a vague sense of unhappiness and an instantaneously invisible long-term disruption [6–8], has received less focus compared to its positive counterpart [9,10]. Previous studies have shown that boredom may exert an influence on students' learning engagement [11]. However, it remains unclear how and to what extent English learning boredom (ELB) and English learning engagement (ELE) correlate. This is an underlying issue that, if resolved, will enrich the study of ELB, a topic to which scholars researching SLA have been gravitating towards within the last four years [12]. Therefore, this research will significantly contribute to explorations of student engagement, a fresh topic gaining increasing recognition [13,14]. Examining the connection between ELE and ELB can also help in building students' psychological empowerment [15,16] by self-regulating emotions and engagement and, at the same time, guide teachers to develop a better understanding of students' psychological states in language learning in order to enhance language teaching.

2. Literature Review

2.1. Studies on English Learning Boredom

Boredom is regarded as "the aversive experience of wanting but being unable to engage in satisfying activities" [17] (p. 482), where the individual's motivation or desire to do something is inhibited. As a negative emotion, boredom affects individuals' experience of the activity in which they are engaging [18], for they are in a state of inadequate stimulation, insufficient arousal and lack of motivation [19]. In the context of language learning,

boredom manifests a "low arousal and unpleasant" nature [12] (p. 2) with two aspects: lack of satisfaction and challenge (LSC) and disengagement, monotony and repetitiveness (DMR) [20]. Researchers in the field of language learning have explored the structure of boredom [20,21], manifestations and fluctuations of boredom [22–25] and the relationships between boredom and other variables [10,18,26–29].

Explorations of the structure of ELB have yielded different results, such as identifying it as a construct with a two-factor structure [20,24,30] or a seven-dimensional construct [21]. Pawlak et al. [20] were the first to explore the structure of ELB in a study focused on Polish university students majoring in English. Exploratory factor analysis (EFA) enabled the researchers to generalize two types of ELB from the perspective of the causes of this emotion. The details of the dimensions will be discussed in Section 3.2 when we describe the research instruments and in Section 5.1 when we analyze the structure of ELB. In the cultural context of English language learning in China, Li et al. [21] identified seven types of boredom of non-English major university students in China, namely, foreign language classroom boredom, task overload boredom, PowerPoint context boredom, assignment context boredom, teacher boredom, learning trait boredom and task overload or lack of meaning boredom.

2.2. Studies on English Learning Engagement

Rooted in educational psychology, ELE is reflected in at least three dimensions, including behavioral, emotional and cognitive engagement [31,32]. Behavioral engagement involves positive conduct (e.g., following the rules), participation in academic activities (e.g., concentration, persistence, discussion) and involvement in nonacademic school activities (e.g., school governance) [32]. Emotional engagement refers to students' responsive emotions in the learning environment, ranging from positive emotions, such as interest and happiness, to negative ones, such as boredom and anxiety. It reflects students "liking or disliking school, the teacher, or the work" [32] (p. 63). Cognitively engaged students can apply learning strategies, such as rehearsal and summarizing, to plan, monitor and evaluate their learning process [33]. Reeve and Tseng [34] extended this three-factor structure (behavioral, emotional and cognitive engagement) to four by adding agentic engagement. Agentic engagement refers to students' agentic contribution to a lesson and its influence on the flow of the course. As agentic individuals, students not only passively respond to the learning requirements but also proactively "personalize and otherwise enrich" the learning material and classroom atmosphere [34] (p. 258).

Although ELE is a multidimensional concept, these dimensions do not exist in isolation but overlap and interact with each other [35,36]. Many researchers have found the reciprocal relationship between language learners' engagement and other psychological factors, for example, motivation [18,37], emotion [18,27,28,38] and language mindsets [27,39]. Hosseini et al. [38] examined the predictive role of classroom social climate and enjoyment in Iranian EFL learners' learning engagement involving behavioral, cognitive, affective and agentive engagement. They presented results showing that both predictors significantly influenced students' engagement and the predictive role of enjoyment was stronger than that of the classroom social climate. Eren and Rakıcıoğlu-Söylemez [39] investigated the relationship between language mindsets, perceived instrumentality, engagement and graded performance among Turkish university EFL learners. The results revealed that students' behavioral, cognitive, affective and agentive engagement in EFL learning were significantly correlated with their language mindsets, perceived instrumentality and grade performance.

2.3. Studies on the Relationship between ELB and ELE

Generally speaking, negative emotions are believed to impede students' engagement by limiting their energy to engage in learning activities [40]. As one of the most frequent negative emotions in English classrooms, boredom is likely to be overshadowed by other negative emotions, such as anxiety [9,10,23,41,42]. However, studies are increasingly arguing that boredom deserves our attention, because it will impede students' learning

motivation and performance [9,43]. As Pekrun and Linnenbrink-Garcia [44] described, boredom is a deactivating emotion, which would limit students' engagement intentions and behaviors. Derakhshan et al. [27] found that there was a significant and direct impact of boredom on EFL student engagement among English major students from Turkish universities. Zhao and Yang's [28] study displayed a collective mediation of boredom and enjoyment in the relationship between perceived teacher support and Chinese high school students' learning engagement. Wang and Liu's [18] investigation also presented the significant predictive role of boredom in senior high school students' English learning engagement.

Despite the existing research, the gap between ELB and ELE is yet to be bridged. First, control value theory (CVT) suggests that negative emotions may dampen students' enthusiasm and energy [7,45], thereby reducing their desire and level of engagement. Prior studies found that some low-activated emotions, such as anxiety [46], negatively correlated with engagement. For example, in the context of reading comprehension, anxiety might hinder students' involvement in reading [47]. Though boredom has been found to negatively influence the learning process, little is known about it. From another perspective, some studies in the field of pedagogy have shown that learning engagement can mitigate negative emotions and lessen their impact on learning outcomes [48,49], but similar studies are not yet widespread in language learning scholarship. Many studies have uncovered that high levels of engagement contribute to academic achievement. Yet whether engagement can indirectly optimize academic performance by mitigating negative emotions in the process must be explored further.

The specific interaction between boredom and engagement in language classrooms requires further examination. Such research is expected to contribute to alleviating the boredom experience and increasing engagement in foreign language classes. Therefore, this study addressed the following research questions:

- What are the structures of ELB and ELE?
- What are the global levels and dimensional levels of ELB and ELE, respectively?
- What is the relationship between students' ELB and ELE?

3. The Study

3.1. Participants

To gain a complete understanding of the situation of English-as-a-foreign-language (EFL) learners in different grades and from six different parts of China, 1157 students from six different provinces, including 653 junior high school and 504 senior high school students from different grades, were finally selected as participants.

3.2. Research Instruments

This study acquired data from one questionnaire (including two scales) to address the research questions presented above. All the items were coded on a 6-point Likert scale ranging from 1 (Disagree completely) to 6 (Agree completely).

Pawlak et al.'s [20] Boredom in Practical English Language Classes–Revised (BPELC-R) was used to measure boredom. It contains two dimensions: LSC (items 1–9), reflecting students' dissatisfaction with the lack of challenge and stimulation, and DMR (items 10–23), which manifests in avoidance and disinterest in learning English. Students were instructed to read the statements and choose the level for each statement that best reflected their actual situation. Items 6, 7, 8, 21, 22 and 23 were reversed.

Reeve and Tseng's [34] 22-item scale was adopted to measure students' ELE. This scale was designed to assess four aspects of student engagement. Behavioral engagement (items 24–28) reflects students' physical involvement in learning. Emotional engagement (items 29–32) represents students' positive and negative emotions in learning. Students' cognitive engagement (items 33–40) includes, for example, learning strategies for absorbing new knowledge. The last dimension, agentic engagement (items 41–45), emphasizes students' "constructive contribution into the flow" of the whole class [34] (p. 258).

3.3. Research Procedures

Altogether, 1183 students were registered to participate in the study. The questionnaire was administered with the help of the English teachers and monitors of the classes. Twenty-six questionnaires were eliminated owing to incomplete items, resulting in 1157 completed questionnaires in total. The obtained data were then analyzed through SPSS 22.0.

4. Findings

4.1. RQ1: Multidimensional Structure of English Learning Boredom and English Learning Engagement

In the EFA, as conducted by direct oblimin rotation when using principal axis factoring (PAF) to explore the structure of ELB [50], the threshold value of factor loadings was set at 0.40. As indicated by the Kaiser-Meyer-Olkin (KMO) of 0.935 (χ^2 = 7717.888, df = 66, p = 0.000), the collected data were suitable for EFA. After five rounds of rotation and the deletion of 11 items, two factors were naturally extracted and cumulatively accounted for 55.587% of all variance. With all the factor loadings above |0.40|, the data indicated a satisfactory factor analysis result. The two dimensions had high reliability with Cronbach's alpha coefficients over 0.70 (0.789–0.910) (See Table 1).

Table 1. Exploratory Factor Analysis Results for English Learning Boredom.

Pattern Matrix [a]			
	Factor 1	**Factor 2**	**Communalities**
Q22 It is easy for me to concentrate on the activities in English class.	0.868		0.693
Q19 I often just sit around doing nothing in English class.	0.832		0.670
Q20 Waiting (e.g., for everyone to finish their task) makes me restless.	0.830		0.732
Q17 I often think about unrelated things in English class.	0.733		0.645
Q14 I am more interested in other subjects than English.	0.673		0.392
Q15 Lack of something interesting/exciting makes me tired and bored.	0.642		0.464
Q23 I actively participate in English class.	0.638		0.416
Q10 Time always seems to be passing slowly.	0.517		0.588
Q02 I often have to do meaningless things in English class.		0.870	0.667
Q04 I am working below my abilities most of the time in English class.		0.805	0.645
Q09 I need more challenging things to do in English class.		0.468	0.330
Q01 I often find myself at loose ends in English class.		0.413	0.427
Cumulative Variance Explained %	49.425	55.587	——
Cronbach Alpha	0.789	0.910	——

[a] Extraction Method: Principal axis factoring; Rotation Method: Oblimin with Kaiser normalization.

Factor 1 is related to DMR, which is reflected in the following aspects: slower perception of time (e.g., Q10, Q23), lack of interest in learning English in class (Q14, Q17), inability to engage in learning (Q19, Q22) and inability to do more interesting things (Q15, Q20). Factor 2 is related to LSC, which is reflected in the following aspects: lack of sense of meaning (e.g., Q2), feeling overwhelmed in English class (Q1), too repetitive and monotonous activity in English class (Q4) and lack of challenge in English class (Q9).

To explore the internal structure of ELE, direct oblimin rotation was run in PAF and the threshold value of factor loadings was set at 0.40. As indicated by the KMO of 0.960 (χ^2 = 17577.403, df = 120, p = 0.000), the collected data were suitable for EFA. After six rounds of rotation and the deletion of six items, three factors were naturally extracted and cumulatively accounted for 73.887% of the variance. The reliability of each factor was over 0.70 (0.907 and 0.946), indicating that the questionnaire was reliable (See Table 2).

Table 2. Exploratory Factor Analysis Results for English Learning Engagement.

Pattern Matrix [a]				
	Factor 1	**Factor 2**	**Factor 3**	**Communalities**
Q24 I listen carefully in English class.	0.936			0.781
Q26 I listen carefully to a new topic.	0.904			0.788
Q25 I try very hard in school.	0.859			0.776
Q28 I pay attention in English class.	0.826			0.811
Q27 I work hard on something new in English class.	0.758			0.766
Q43 I let my English teacher know what I'm interested in.		0.911		0.790
Q42 I tell the teacher what I like and what I dislike.		0.880		0.649
Q45 I offer suggestions to make the class better.		0.775		0.706
Q44 I express my preferences and opinions during class.		0.651		0.704
Q41 I ask questions during class.		0.546		0.603
Q35 I make all the different ideas fit together and make sense.			−0.927	0.814
Q34 I connect what I am learning with my own experiences.			−0.918	0.743
Q36 I make up my own examples to understand the important concepts.			−0.890	0.774
Q33 I relate what I'm learning to what I already know.			−0.830	0.796
Q39 I keep track of how much I understand, not just the right answers.			−0.515	0.655
Q38 I stop once in a while and go over.			−0.502	0.668
Cumulative Variance Explained %	59.703	69.867	73.887	——
Cronbach Alpha	0.942	0.907	0.946	——

[a] Extraction Method: Principal axis factoring; Rotation Method: Oblimin with Kaiser normalization.

Factor 1 is related to behavioral engagement in the following ways: listening carefully in English class (e.g., Q24, Q26), putting effort into learning English (Q25), active participation (Q27) and concentration (Q28). Factor 2 is related to agentic engagement, as reflected in the following: actively expressing opinions or asking questions (e.g., Q41, Q44), communicating with the teacher (Q42, Q43) and making suggestions about class content (Q45). Factor 3 is related to cognitive engagement and is subsumed as follows: performing integration of knowledge (Q33, Q35), using different strategies to obtain knowledge (e.g., Q34, Q36), performing planned review (Q38) and valuing the level of comprehension of knowledge (Q39).

4.2. RQ2: Levels of English Learning Boredom and English Learning Engagement

Table 3 demonstrates the general level of students' ELB from extreme values, means and standard deviations. Combining the scoring of boredom and engagement levels by scholars [20,34], we considered a score between 2.5 and 4 as low-to-medium level and between 4 and 5.5 as medium-to-high level on the six-point scale of this study. As seen in the table, the average level of students' ELB was 2.87 (*SD* = 1.00), showing a low to medium [9] reported level of ELB among secondary school students. For the dimensions of ELB, the average for DMR was 2.92 (*SD* = 1.09) and 2.76 (*SD* = 1.09) for LSC.

Table 3. Results of Descriptive Analysis of Sub-dimensions of English Learning Boredom.

Variables	***Min***	***Max***	***M***	***SD***
Disengagement, monotony and repetitiveness	1.00	6.00	2.92	1.09
Lack of satisfaction and challenge	1.00	6.00	2.76	1.09
Global ELB	1.00	6.00	2.87	1.00

N = 1157; ELB = English learning boredom.

Table 4 shows the general level of secondary school students' engagement through extreme values, means and standard deviations. The table shows that, in general, students had a medium to high level of engagement in English learning with an average level of 4.00 (*SD* = 1.03). The average level of behavioral engagement was 4.46 (*SD* = 1.10), higher than cognitive (*M* = 4.11, *SD* = 1.16) and agentic engagement (*M* = 3.41, *SD* = 1.24).

Table 4. Results of Descriptive Analysis of English Learning Engagement.

Variables	*Min*	*Max*	*M*	*SD*
Behavioral engagement	1.00	6.00	4.46	1.10
Cognitive engagement	1.00	6.00	4.11	1.16
Agentic engagement	1.00	6.00	3.41	1.24
Global ELE	1.00	6.00	4.00	1.03

N = 1157; ELE = English learning engagement.

4.3. RQ3: Negative Relationship between ELB and ELE

Table 5 displays the correlation between students' ELB and ELE. It can be observed that there was a significant and negative correlation between the two concepts as well as their dimensions. Table 5 indicates a medium but significant negative correlation between students' ELB and ELE, with a correlation coefficient of −0.365 ($p < 0.01$). Among the dimensions of ELE, the highest correlation coefficient was between behavioral engagement and ELB ($r = -0.469$, $p < 0.01$). Regarding the correlation between ELE and the dimensions of ELB, the correlation coefficient of ELE with DMR was −0.417 ($p < 0.01$), which was much stronger than that with LSC ($r = -0.175$, $p < 0.01$). The highest correlation coefficient between each dimension of ELB and ELE was between behavioral engagement and DMR in boredom ($r = -0.469$, $p < 0.01$).

Table 5. Results of Pearson Correlation between English Learning Boredom and English Learning Engagement.

	Cognitive Engagement	Agentic Engagement	Behavioral Engagement	Global ELE
Lack of satisfaction and challenge	−0.191 **	−0.019	−0.263 **	−0.175 **
Disengagement, monotony and repetitiveness	−0.413 **	−0.232 **	−0.469 **	−0.417 **
Global ELB	−0.367 **	−0.174 **	−0.434 **	−0.365 **

** $p < 0.01$ (two-tailed). *N* = 1157; ELB = English learning boredom; ELE = English learning engagement.

5. Discussion

5.1. Structure and Levels of ELB

EFA revealed that Chinese students' ELB is a two-dimensional construct. Since the questions retained from the original questionnaire still reflected the characteristics of boredom proposed in that questionnaire, we used their original names, as both relate to the causes of boredom, in close alignment with the twofold nature pointed out by Pawlak et al. [20]. Factor 1 is reactive, which manifests as students' passive response to monotony and repetition in the classroom, leading to less behavioral and emotional engagement. Factor 2 is proactive, meaning that students' dissatisfaction with the current state of affairs can serve as a catalyst for them to show greater enthusiasm for learning when situational changes occur. In the factor analysis, positive emotion items opposing ELB emotions, such as I always feel entertained in class and I can find something interesting to do in class, are not enclosed in the final construct. These items in Pawlak et al.'s [20] questionnaire might imply an expectation of a lively classroom atmosphere for students who feel bored. However, unlike the university students in Pawlak et al.'s [20] study, who perhaps have more mature cognition and perception of boredom in class, the secondary school students in the current study may have a fainter awareness of the implied meanings conveyed by the items, which accounts for the positive items not being included in the final scale.

According to the collected data, the secondary school students had a low to medium level of ELB. This result is similar to Wang and Liu's [18] (2022) study which found that senior high school EFL learners experienced a low level of boredom. The level of boredom partly depended on students' perceived control and value in the process of learning English.

Specifically, those who felt more competent and viewed English as more valuable tended to report lower levels of boredom than their peers. These findings were consistent with the claims of CVT, in which the emergence of boredom was related to students' perceptions of controllability and value of the learning activities in which they engaged [51].

Students' feelings of boredom might be related to the class content. For example, repetitiveness in English class might be a significant cause of boredom. The data suggest that the average level of the dimension DMR was relatively higher than the other dimensions, as well as general ELB, indicating that it is a main component of students' ELB. For some students, English class was highly repetitive; thus, they might have found it unchallenging and uninteresting. This result is in accordance with Kruk and Zawodniak's [22] finding that students perceived writing tasks and reading texts as the most boring aspects of class. In most cases, the activities mentioned above were repetitive and unchallenging and could not stimulate students to get involved in the learning process.

In a related study, Chapman [10] reached a similar conclusion after summarizing the features of classroom activities that may induce boredom. The findings show that the number, type, focus and format of classroom activities all had a role in causing students' boredom. Therefore, students usually welcomed classroom tasks of various formats. If there were some changes in each class, it would awaken their interest.

5.2. Structure and Levels of ELE

Factor analysis revealed that ELE is a three-dimensional structure including cognitive engagement, agentic engagement and behavioral engagement.

Among the four dimensions of Reeve and Tseng's [34] original questionnaire, behavioral engagement refers to students' attention and effort put into classroom tasks; emotional engagement refers to students' positive affective experiences during foreign language learning, such as enjoyment and interest; cognitive engagement refers to the use of learning strategies and self-management strategies, such as making plans; and agentic engagement, an innovation of Reeve and Tseng [34], refers to students' conscious and active influences on classroom progress. In contrast to Reeve and Tseng [34], this study did not include emotional engagement, questions about which would reflect different characteristics of students' learning engagement featuring its independent existence from others, based on Reeve and Tseng [34]. In the present study, the questions in this dimension were mixed with the other three dimensions in the factor analysis; therefore, it did not constitute an independent factor and was removed. After this deletion, the questions in the other three dimensions were the same as the original design, except for items 37 and 40, under the cognitive dimension, which also failed to enter the final factor structure and were deleted. The differences in factor structure may be caused by differences in the study population. Specifically, Reeve and Tseng [34] studied high school students in Taiwan, while this study focused on secondary school students in mainland China, with students' perceptions of their engagement varying in terms of social environment and educational background.

Students reported a medium to high level of engagement in English learning, which is similar to Wang and Liu [18] in their exploration into the relationship between English learning engagement, motivation, boredom and buoyancy based on Reeve and Tseng's [34] four factor engagement structure. The study discovered that, in general, senior high school students were highly engaged in English learning. Concerning the three dimensions of engagement in the present study, the highest of which was behavioral engagement, the latter form of engagement entails not only observing classroom rules but also involvement in language learning tasks. The former goal is easy to reach considering that secondary school students are physically and mentally mature, compared with students at other educational levels, and have a certain degree of self-management ability. For the latter, most of the students could follow the teacher's thoughts and complete the assigned tasks. The lowest value was that for agentic engagement, which emphasized, as Reeve and Tseng [34] clarified, students' "constructive contribution" (p. 258) to receiving their teachers' instruction. This dimension centers on students' initiative as the masters of learning, which

is still overlooked in many English classrooms today in China, where students' proactive thinking and active participation are underdeveloped. The result is similar to that of Eren and Rakıcıoğlu-Söylemez [39], which also revealed the different levels concerning the behavioral, cognitive and agentive engagement in English learning.

According to self-determination theory, teachers should value students' autonomy and view them as active organisms [52]. By enhancing students' self-regulation, teachers can lead students to adopt more positive coping strategies when boredom arises, thus facilitating the transformation of students' external to internal motivation for learning. The ideal state of students' engagement comes from their intrinsic motivation [52], where students will engage actively and achieve personal growth with high levels of inner resources and self-regulation abilities. Otherwise, learning would stem from extrinsic motivation, where students are stimulated by the teachers' demands. Only when students endorse external expectations or teachers' encouragement can they understand the significance of the learning activity and ultimately internalize this external motivation to engage actively in the learning activity. A similar idea can be found in CVT, which emphasizes the importance of students' perceptions of the value of learning activities [8]. The more students identify the value of the learning activity, the less likely they are to feel bored. Thus, perceptions of learning activities can lead to the opposite development of academic boredom and engagement status.

5.3. Correlation between ELB and ELE

As seen in Table 5, there was a significant negative correlation between students' ELB and ELE in general. This tendency has been shown in Derakhshan et al.'s research [27], which utilized the same questionnaire as our study and yielded a negative predictive role of boredom on engagement in college EFL students' English learning. Similarly, some empirical studies [18,28] also found a negative relationship between boredom and engagement in senior high school English learning. All these findings indicate that boredom can cause low levels of attention, information processing and engagement [40,44]. The data also suggest that students' high level of boredom may to some extent inhibit their engagement in English learning. On the contrary, active engagement may lessen boredom. Therefore, it is understandable that when the level of ELB ranges from low to medium, the level of ELE will develop from medium to high, as ELB did not impede students' ELE too much.

The data show a negative correlation between behavioral engagement and ELB. Behavioral engagement involves positive conduct (e.g., following the rules), participation in academic activities (e.g., concentration, persistence, discussion) and involvement in nonacademic school activities (e.g., school governance) [32]. Buhs and Ladd [53] supported the idea that cooperative participation and automatic participation reflect different levels of behavioral engagement, with the former focusing on adhering to classroom rules and the latter referring to students' active choices. Therefore, if students feel bored, the first signal is a decrease in their behavioral engagement. The weakest correlation is that between agentic engagement and ELB. Reeve and Tseng [34] defined agentic engagement as "students' constructive contribution into the flow of the instruction they receive" (p. 258). In their opinion, agentic engagement is students' intentional interaction with the learning environment, which justifies the influence of ELB on agentic engagement, based on the data of the current study.

The correlation of ELE with DMR is much stronger than that with LSC. Therefore, DMR will likely decrease students' overall ELE. According to self-determination theory, three psychological factors are required to stimulate students' intrinsic motivational tendency to engage—namely, autonomy, competence and relatedness [52]. Among them, the need for autonomy might be damaged by the monotony and repetitiveness of an English class. Students have little opportunity to choose what they are interested in and the types of activities in the typical English learning process, while LSC might relate to students' comments about their competence.

There was an obvious correlation between behavioral engagement and DMR. Pekrun et al.'s [8] study revealed the negative relation between boredom and behavioral (effort regulation), cognitive (attention), motivational (intrinsic motivation) and cognitive-behavioral (e.g., self-regulation) engagement. Students with low levels of positive emotions and high levels of negative emotions present inadequate school and learning engagement. Besides, academic boredom is believed to cause a lack of attention, task-irrelevant thoughts and lower-level self-regulation [54], thus impeding students' engagement in learning activities. Similar to Pekrun and Linnenbrink-Garcia's [44] viewpoint, boredom is a deactivating emotion that can limit students' engagement intentions and behaviors. In contrast, in this study, there was no significant correlation between agentic engagement and LSC, possibly due to agentic engagement's greater levels of student participation and measurement difficulties. When students feel that a learning task is not very challenging, they will not perceive agentic engagement as necessary and will not be enthusiastic about learning.

6. Conclusions and Implications of the Study

Generally, ELB has a two-dimensional structure, including DMR and LSC. EFL learners in the Chinese context reported low to medium levels of ELB. ELE has behavioral, cognitive and agentic components, which were medium to high overall in this study. This study was a meaningful attempt to reveal the structures of ELB and ELE as well as the correlation between them. Theoretically speaking, we validated Pawlak et al.'s [20] BPELC-R questionnaire in the Chinese context. In the current study, ELB was accompanied by some negative affective experiences and did not contain positive emotions, which is consistent with previous scholars' definition of boredom as a negative, unpleasant, unsatisfying [12,17] emotional experience. The data of this study provided support for previous definitions and a reference for future research. The study also shed new light on ELE. The findings suggest that the boundaries between different dimensions of engagement may not be obvious to secondary school students. Due to cognitive immaturity and lack of experience, students may fail to distinguish different dimensions of engagement. This is why our participants' engagement was not reflected in the emotional dimension. Such a finding provides new evidence for future research on engagement. The negative correlation between ELB and ELE in the current study also supports its relevance for future research.

The findings of this study have the following implications for practical teaching. First, it would be reasonable to reduce repetitive activities and increase a diversity of activities in English classes. Although repetition may reinforce students' memorization efforts, a long period with a monotonous task format will inevitably lead to boredom. Various activities aiming to increase students' motivation and engagement should be considered, including role-play, word guessing and drama rehearsal. Diversification of teaching activities can sustain students' interests in learning English in the long term, thus stimulating their interests in English as a subject and development of intercultural communication awareness. It should also be noted that the teacher's dialogic interaction with students plays an important role in organizing these activities. For instance, teachers should balance the usage of closed questions, since such usage may limit the students' opportunities to actively participate in the tasks and further make students feel bored in English classes [55]. Second, teachers should help students find a sense of belonging. The questionnaire results showed that many students thought they had to do something meaningless in English class, which made them feel that their time in class passed slowly. Since the perception of time is an element of boredom, it is necessary to give students a greater sense of the value of the current activity. When designing learning activities, teachers can introduce scenarios that might happen in real life to make students feel less bounded by the classroom. Third, it is of paramount importance that students have a sense of control over their studies. An optimal level of challenge is essential for students because, according to CVT, boredom will be aroused by questions that are either too difficult or too easy. Hence, offering students options within a certain scope is clearly necessary and, consequently, proficient and academically challenged students will not perceive the

questions as too easy or too difficult. All these three suggestions all orientate to empower the students to be resilient [56] when they face boredom in their English learning.

Although we tried to address the research questions with considerable reliability, the study was not free from limitations. First, the present study relied on a questionnaire to collect data, which was insufficient to delve into more detailed and profound information about students' behavioral and psychological activities. Therefore, a micro-perspective and data collection using a greater palette of tools, such as diaries, classroom observation and field journals, could be taken into consideration. Second, boredom is such a complicated emotion that it is difficult to grasp it fully in a short period. Its influence on students' engagement may also be mediated by different variables, such as motivation, beliefs, or language proficiency. These factors should be acknowledged in future longitudinal research. Finally, since the participants were all Chinese, the results may not reflect the variations of ELB and ELE of students from different countries. To obtain a more comprehensive picture of students' emotions and performance, further research may be conducted on students with different cultural backgrounds.

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