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# Exploring the components of EAP learners' emotional engagement and their relationship with language achievements

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This study has explored emotional engagement among learners who learned English for Academic Purposes (EAP) in the context of a key provincial university in China. The objective of this study is to investigate the components of emotional engagement and their relationship with learners' language achievement. The significance of the current study accentuates the multifaced nature of emotional engagement in specific contexts. A total of 399 non-English major undergraduates responded in an adapted version of emotional engagement scale. Both an exploratory and confirmatory factor analysis were conducted to identify specific components of learners' emotional engagement. The findings have showed five components of EAP learners' emotional engagement: enthusiasm for academic English, appreciation for teachers, satisfaction with school environment, positive feelings with peers and aversion to learning academic English. Learners' language achievement was found significantly related to aversion to learning academic English, while there was no significant relationship between learners' language achievement and enthusiasm for academic English, appreciation for teachers, satisfaction with school environment, and positive feelings with peers. The research findings generate important insights for teachers and researchers on the connection of different facets of learners' emotional engagement with their language achievements, and pedagogical implications have also been suggested.

## KEYWORDS

components, correlation analysis, EAP learning, emotional engagement, language achievements

## Introduction

Engagement is a psychological construct and popular research topics in educational psychology (Reschly and Christenson, 2012; Sinatra et al., 2015; Mercer and Dörnyei, 2020). In recent years, the concept of engagement is extended to include learners' socioemotional and cognitive relationship with learning environment (Reschly and Christenson, 2012; Järvelä and Renninger, 2014). Engagement is defined as "the extent of a student's active involvement in a learning activity" (Reeve, 2012: 150) that underscores action

as the defining feature (Lawson and Lawson, 2013). Student engagement is a meta-construct consisting of dimensions of behavior, cognition and emotion (Fredricks et al., 2004). Behavioral engagement is indicated through learners' participation and efforts in the learning process such as attending classes or completing assignments, which is observable while cognitive engagement involves learners' cognition which has been a research focus for centuries in the field of second language acquisition (Svalberg, 2009). In the past decade, the turn of positive psychology in second language acquisition has brought about abundant research on the importance of emotions to language development (Dewaele, 2015; MacIntyre et al., 2019). Emotional engagement, which is defined as a multifaceted construct that encompasses positive and negative emotional reactions to teachers, classmates, academics and schools (Fredricks et al., 2004) and considered as the catalyst for better learning and prerequisite for other dimensions of engagement (Skinner and Pitzer, 2012; Pekrun and Linnenbrink-Garcia, 2012) is still underexplored.

In foreign language learning context such as in English for Academic Purposes (EAP) program, the role of emotional engagement in ensuring persistent engagement in learning language, which is typically a long and arduous process particularly for struggling learners, is critically important (Sang and Hiver, 2021). However, there is insufficient research of emotional engagement, particularly on its specific components in EAP settings. In China, most undergraduates using English in their future study or work means that they study bilingual and EMI courses or communicate in academic conference related to their fields (Cheng, 2016). These needs can be met by EAP course, which has been established as an important course in the curriculum reform in many universities, aiming to cultivate students' academic English proficiency. With a diverse background and different English levels, students have reported EAP course to be very challenging which resulted in a high attrition rate (Du et al., 2022; Cheng, 2016; Afshar and Movassagh, 2016). This situation called for attention on how to engage learners with the EAP course and how to teach it more effectively (Canagarajah, 2014; Cheng, 2016; Afshar and Movassagh, 2016).

Although emotional engagement is frequently seen as an essential element of learning, its relationship with academic achievement is complex and contingent upon research contexts. While some studies found a substantial influence of emotional engagement to students' English language achievement (Dincer et al., 2019; Liu et al., 2022; Li, 2024), several studies failed to identify emotional engagement as a predictor of language learners' achievement (Sagayadevan and Jeyaraj, 2012; Chiu et al., 2021; Guo et al., 2023). Through large-scale survey of EFL learners' engagement in foreign language classroom, individual-based cognitive engagement rather than emotional engagement has been found as predictive to language achievement (Guo et al., 2023). Therefore, the influence of emotional engagement on language achievement among EFL learners needs to be further investigated.

Empirical evidence has proved that emotional engagement plays a pivotal role on other dimensions of engagement, because emotions constitute an intrinsic dimension which functions as catalytic mechanisms that can activate or deactivate other engagement (Baralt et al., 2016; Dao, 2019; Henry and Thorsen, 2020). Compared to behavioral and cognitive engagement,

emotional engagement has received the least attention in the field of second language acquisition (Wormington et al., 2011; Sagayadevan and Jeyaraj, 2012; Fredricks et al., 2004). With the recognition of emotions' role, the inclusiveness of emotional engagement construct, and the challenges that students faced with learning English for Academic Purposes, it is of great significance to explore the constituents of emotional engagement and its relationship with language achievement. Thus, the current research will provide a further understanding of the complexity of emotional engagement and its impact on learner achievements, and shed lights on the implications for EAP learning and pedagogical practices. The research questions are the following:

- (1) What are the components of EAP learners' emotional engagement?
- (2) What is the relationship between learners' emotional engagement components and their language achievement?

## Literature review

### Emotional engagement

Language learning has been viewed as a cognitive process and an emotional journey for many language learners (Swain, 2013). Emotional engagement is categorized into internal and external dimensions (Finn, 1989; Gunuc and Kuzu, 2014; Fredricks et al., 2004). The external dimensions refer to learner' emotions toward the outside environments. At the school level, emotional engagement identifies itself with learners' sense of belonging and value to the institution (Finn and Zimmer, 2012). At the class level, emotional engagement includes learners' feelings aroused from taking part in tasks in the classroom, and attitudes toward teachers and peers (Skinner et al., 2009; Reeve, 2012). The internal dimensions of emotional engagement involve with learners' own factors such as learners' intrinsic motivation, willingness, confidence and interest (Patrick et al., 1993; Schaufeli, 2002). Beside these dimensions, emotional engagement is indicated by positive emotions such as motivated involvement, enthusiasm, interest, and enjoyment during learning activities and negative emotions such as anxiety, frustration and boredom (Skinner et al., 2009). These studies show the complexity of emotional engagement across social and instructional situations. Emotional engagement could activate or deactivate learner behavioral and cognitive engagement which further influences language acquisition (Mercer, 2019). Much of existing research examined emotional engagement in general English learning. In the context of EAP learning, which is more cognitively demanding, there remains a crucial question about what underpins learners' emotional engagement.

Emotions are abundant in language classrooms (Swain, 2013). In the research of task engagement, emotional engagement is defined as affective involvement in a task and it constitutes a subcomponent of task engagement in conjunction with behavioral engagement and cognitive engagement (Philp and Duchesne, 2016). Other studies identify willingness (Svalberg, 2009), purposefulness and autonomy (Baralt et al., 2016) and learners' perceptions of their own task performance (Phung et al., 2021)

as indicators of emotional engagement. To sum up, these studies have yielded diverse findings on the dimensional structure of emotional engagement. There are some convergences on certain types of emotions but there still exists much divergence because emotions are malleable. Current research underscores the contextual and dynamic nature of engagement (Hiver et al., 2021b). Therefore, it requires further investigation for clarity about the subtypes or components of emotional engagement across contexts.

Emotional engagement in this study examines students' overall perceptions of their connection to school and involvement in learning, rather than their engagement within a specific classroom situation, focusing on EAP course-level engagement. With discussions above, considering the complexity and importance of emotions in language learning, it is essential to explore the structural components underlying emotional engagement among EAP learners in China. The rationale resides in the possibility that emotions differ across instructional and/or cultural contexts (Dewaele and MacIntyre, 2014). Exploratory factor analysis (EFA) is a statistical method used to uncover the underlying latent structure (factors) of a set of observed variables (Thompson, 2004). This research aims to investigate the structural components underlying the emotional engagement.

## Language achievement

When compared to language performance, which stresses the capacity to utilize language in authentic contexts, language achievement focuses on the quantifiable development that students make as a result of learning in educational settings. Language achievement in the context of second language acquisition has been thoroughly examined from the viewpoints of teaching methodologies, learning strategies, and motivation. It has been studied as an indicator of learners' academic performance through language tests (Horwitz, 2001; Jin and Zhang, 2021; An et al., 2021), self-ratings (Charoento, 2017), or course scores (Karabıyık, 2019). Achievement is defined as a measure of a person's academic proficiency and is usually assessed by standardized achievement tests or exams, whereas learning outcomes concern more about how much a person acquires knowledge (McLean, 2001). In the study learners' language achievement has been measured through grades in the final exams.

## Relationship between learners' emotional engagement and language achievement

Learner engagement as a meta construct has been recognized in the broad educational research (Connell and Wellborn, 1991; Finn, 1989; Finn and Zimmer, 2012). Higher levels of learner engagement have been linked to many desirable educational outcomes such as academic achievement, confidence, motivation, inquiry and goal-oriented abilities (Christenson et al., 2012). However, in the domain of second language acquisition, there are limited studies on the relationship between emotional

engagement and language achievement (Dincer et al., 2019; Chiu et al., 2021; Wang et al., 2023). In some studies that have examined the relationship between emotional engagement and language achievement produced mixed results. On one hand, it is found a positive correlation between learners' emotional engagement and learning outcomes. For example, in the study of task-based language interaction, levels of learners' positive emotional engagement fluctuated and positively related to the amount of L2 production and the degree of collaboration. However, there was no relationship between emotional engagement and language-related episodes (LRE) (Dao and Sato, 2021). On the other hand, studies have found a moderate positive correlation between emotional engagement and academic achievement through a mixed study among secondary students (Wara et al., 2018). Learners who maintained good relationships with their lecturer were found to be more emotionally engaged in learning. Foreign language enjoyment and classroom anxiety were found correlated with learner behavioral engagement and self-report achievement (Feng and Hong, 2022). However, the emotional engagement did not demonstrate a statistically significant mediating effect to the pathway between lecturer-student interaction and academic achievement (Sagayadevan and Jeyaraj, 2012). In the domain of emotional engagement with corrective feedback, learners' emotional engagement is elaborated as affective response, attitudes, motivation changes, and negative emotions about revisions (Mahfoodh, 2017; Zhang and Hyland, 2018).

With limited research above, the relationship between emotional engagement and language achievement needs to be supported by more empirical evidence. The measurement of emotional engagement should be built within a specific context. It has been argued that one potential way for advancing our understanding of the characteristics of learner engagement and its relationship with other constructs as well as L2 learning is to investigate and measure emotions or emotional engagement as part of learner engagement (Hiver et al., 2021a). This research will firstly explore the components of emotional engagement in foreign language learning, and then investigate their relationships with language achievement.

## Methodology

### Participants sampling

In the current study, participants were from a key provincial university in the east of China where English for Academic Purposes (EAP) was a two-credit course offered to all undergraduates in the fourth semester, compulsory in accordance with the College English (CE) curriculum in the university. A total of 414 participants were conveniently sampled based on the availability and easy access to their final grades. They were non-English major sophomores who attended EAP course. They were around 20 years old, majoring in different subjects including computer science and economics. In previous three semesters the students have attended the general English course which aims to cultivate their general English competence.

## Instruments

**Questionnaire:** The emotional engagement scale (EES) were adapted from the student engagement instrument (SEI) (Appleton et al., 2006) and inspired by the research of students' development of emotional engagement (Ulmanen et al., 2016). Item statements in SEI were changed wording to fit into the EAP learning context. For instance, "At my school, teachers care about students" was adapted as "I feel like my English teacher care about and help us." Ulmanen et al. (2016) put forward the social ingredients of emotional engagement consisting of students' sense of belonging with teachers, peers and school environment. Items denoting these feelings were included. Finally, the EES contains a total of 30 items indicating: (1) feelings toward relationships with teachers and peers (10 items); (2) feelings of personal safety and belonging to the school (7 items); (3) perceptions of and attitudes toward the EAP learning (13 items). The items are rated on a five-Likert scale (1 = strongly disagree to 5 = strongly agree). It is an investigation of learners' emotional engagement at the course level so there are more items relating to learners' feeling toward the EAP course. Additionally, the questionnaire was created in Chinese, the individuals' mother tongue, to ensure a precise and speedy comprehension of the issues. In this study, the 30 items achieved a Cronbach's Alpha at 0.938, which shows the consistency and reliability within these items.

**Language proficiency test:** The present investigation of learners' emotional engagement is based on the EAP course; learners' language achievement could be reflected through their end-of-term examination scores. There are two sections in the test with a total score of 100. Section 1 consists of multiple-choice questions with three reading comprehension passages, ten cloze tests, and twenty-five listening skills test items. The written portions of Section 2 include essay writing on an academic subject and translation from Chinese to English. It focuses on testing the language skills of reading, writing, listening and translation except the speaking skill because it is a written test. Reading sections are testing learner comprehension abilities. Listening tests the skills of sound recognition and comprehension; writing tests use of language expression and critical thinking; and translation tests the ability to transform and apply the target language.

## Data collection and data analysis

This study was based on the survey conducted through an internet application called *Wenjuanxing*. In all, 414 questionnaires were collected. Among them, 399 were used while 15 were discarded because the answers given by participants were the same all through. SPSS 25 was used to process the data. An exploratory factor analysis (EFA) and a confirmatory factor analysis (CFA) were conducted to determine the factor composition structure of the adapted EAP learners' emotional engagement scale. EFA is used to identify the underlying dimensions of a domain of functioning. CFA is used to examine the derived factors considering the theoretical predictions that follow the literature review and the operational definitions of the targeted categories. Both approaches help enhance the validity and reliability of the study. The mean, standard deviation, maximum, and minimum from the descriptive

statistics which indicate the overall state of the students' emotional engagement was then computed.

## Results

### The components of learners' emotional engagement

The instrument was firstly tested for internal consistency. Barlett's test of sphericity  $\chi^2(276) = 7,003.623, p = 0.000$ , and the KMO value at 0.946 indicated the reliability for conducting the principal component analysis. Five distinct factors were extracted accounting for 72.399% of the variance. The items that had a factor loading within 0.5 were set not to be displayed. The principal factors with relevant item loadings are shown in Table 1.

As is indicated in Table 1, principal component factor 1 is concerning about enthusiasm for academic English (EAE), which is indicated by interests, or recognition of the course value (1, 2, 3, 4, 6, 7). All the factor loadings are above 0.5 and within these items the Cronbach's Alpha is 0.901 which shows good consistency. Factor 2 concerns with learners' appreciation for teachers (AT), such as teacher support and teacher and student relationships (10, 11, 15, 19). All the factor loadings are above 0.6 and the Cronbach's Alpha is 0.889 which indicates consistency within these items. Factor 3 is relating to learners' feelings toward learning resources, activities, teaching facilities and learning atmosphere in the school (16, 17, 18, 20). Therefore, factor 3 is generalized as satisfaction with school environment (SSE). The factor loadings are above 0.6 and the Cronbach's Alpha is 0.932 which shows a very good consistency within these items. Factor 4 reflects learners' negative emotions in EAP learning including anxiety in learning, frustrations in front of hardships and boredom (9, 28, 29). This factor is labeled as aversion to academic English (AAE). The factor loadings are also above 0.7 and the Cronbach's Alpha is 0.863 which is also good. Factor 5 is about learners' positive feelings with peers (PPF), such as admiration and willingness of cooperation (23, 24, 25, 27). All the factor loadings are above 0.5 and the Cronbach's Alpha is 0.877, which suggest adequate reliability of the data.

AVE is used to measure the convergent validity of constructs. The AVE of factor 1, 2, 3 and 5 were all above 0.6, indicating that these factors were very reliable (Fornell and Larcker, 1981). The AVE of factor 3 is higher, reaching 0.739, indicating excellent convergent validity. The AVE of factor 4 is above 0.5 which is also acceptable. The CR indicator is used to evaluate internal consistency. And the CR of all factors exceeds 0.7, indicating good internal consistency.

Confirmatory factor analysis (CFA) was conducted to test the reliability of this five-factor model, As is shown in Table 2, the results are  $X^2 = 791.371, df = 220, p < 0.001, GFI = 0.887, CFI = 0.911, RMSEA = 0.0081$ , and therefore the five-factor model provides a good data-model fit.

Table 3 shows the descriptive statistics of learners' emotional engagement level. The average level of appreciation for teachers (AT) was 4.57, which is the highest, indicating participants' recognition and emotional closeness toward their teachers. The mean score for participants' satisfaction with school environment (SSE) is 4.22, which is the second high, showing their awareness

TABLE 1 The factor items and their loadings.

Items	Factor loadings	CR	AVE
<b>Factor 1-Enthusiasm for academic English (EAE)</b>		0.906	0.622
1. I am intrigued by EAP.	0.784		
2. I like the conciseness and abstractness of EAP.	0.783		
3. I think EAP can enhance my knowledge of professional fields.	0.811		
4. I think learning EAP can improve my comprehensive quality.	0.695		
6. Learning EAP is helpful for postgraduate study.	0.658		
7. I am interested in reading English academic journals.	0.595		
<b>Factor 2-Appreciation for teachers (AT)</b>		0.891	0.622
10. The English teacher's classroom demeanor and attire are always appropriate.	0.822		
11. I feel like my English teacher care about and help us.	0.728		
15. I get on well with my English teacher.	0.673		
19. My English teacher' academic and teaching proficiency are satisfactory.	0.557		
<b>Factor 3-Satisfaction with school environment (SSE)</b>		0.933	0.739
16. I am satisfied with all the teaching facilities in our university.	0.727		
17. The learning resources provided by the school are abundant.	0.814		
18. The extracurricular activities carried out by the school are helpful for EAP learning.	0.822		
20. I recognize the school places great emphasis on EAP learning.	0.726		
<b>Factor 4-Aversion to academic English (AAE)</b>		0.752	0.505
9. I feel anxious in EAP learning.	0.821		
28. EAP course is too difficult for me.	0.748		
29. I feel EAP course is rigorous and boring.	0.709		
<b>Factor 5-Positive feelings with peers (PFP)</b>		0.878	0.644
23. I admire my classmates' bravery in answering English question.	0.758		
24. I admire my classmates who are active in English class.	0.772		
25. I am influenced by my classmates' hard work in English learning.	0.619		
27. I like cooperative learning with my classmates.	0.570		

\*The item numbers indicate the place where the items occur in the scale.

TABLE 2 Goodness of fit for measurement the five-factor model of the learners' emotional engagement scale.

Model	$\chi^2$	Df	P	RMSE	GFI	CFI	IFI
Five factors	791.371	220	0	0.081	0.887	0.915	0.902

to the learning environment. The third higher score for learners' emotional engagement is positive feelings with peers (PFP) at 4.14, which shows peers' impact on learner's emotional engagement is also high.

Among the five components, the participants demonstrated higher emotional tendency toward the learning contexts such as the school environments, teachers, and peers with an average score of 4.31, indicating that learners are emotionally leaned on these external factors. They have a sense of belonging to the university. The result demonstrates that students are not entirely willing to take the EAP course. And they have experienced many negative emotions during their EAP learning although they know this course is valuable and relevant for their future research and academic publishing. But not everyone of them will go further study or

TABLE 3 Descriptive statistics of emotional engagement level.

Factors	n	Max.	Min.	Mean	Std. deviation
EAE	399	1	5	4.08	0.73
AT	399	1	5	4.57	0.51
SSE	399	1	5	4.22	0.75
AAE	399	1	5	3.2	0.93
PFP	399	1	5	4.14	0.74

publish in English in the future, which means that not every learner needs to learn EAP. However, it is a compulsory course set by the administration in the university. To effectively carry out the course the school has provided abundant learning resources and teacher training programs. The school environment for EAP learning and teachers' expertise is satisfying, which can provide sufficient affordances for learner engagement. When confronting with challenges of the course, learners have showed more emotional attachment to the learning environment.

## The relationship between factors of learners' emotional engagement and language achievement

Learners' language achievement is measured by their end-of-term exam score. Participants' scores ranged from 28 to 92 out of 100, with the mean score being 68.1 (SD = 11.46). See Table 4. It shows learners' language proficiency is significantly different.

Pearson correlation coefficient test is used to explore the relationship between components of emotional engagement and participants' language achievement. Emotional engagement components are independent variables while learners' language achievement is dependent variable. The average of each emotional engagement component is calculated for each participant. The results of Pearson correlation coefficient test are shown in Table 5.

As is shown in Table 5, there is a positive and weak correlation between learners' aversion to academic English and their language achievement ( $r = 0.189^{**}$ ,  $p < 0.01$ ), indicating that learners' negative emotions weakly or lightly relate to their language achievement. However, there is no correlation between learners' enthusiasm to academic English, satisfaction with school environment, appreciation for teachers and peers and learners' language achievements. Among these five emotional engagement components there is also a significant correlation between each other. Learners' enthusiasm to academic English is significantly correlated with satisfaction with school environment ( $r = 0.637^{**}$ ,  $p < 0.01$ ), appreciation to teachers ( $r = 0.589^{**}$ ,  $p < 0.01$ ) and peers ( $r = 0.670^{**}$ ,  $p < 0.01$ ). Learners' satisfaction with school environment is significantly correlated with positive feelings with peers ( $r = 0.699^{**}$ ,  $p < 0.01$ ) and teachers ( $r = 0.681^{**}$ ,  $p < 0.01$ ). Learners' aversion to academic English are significantly related to enthusiasm to the course ( $r = 0.344^{**}$ ,  $p < 0.01$ ), school environment ( $r = 0.252^{**}$ ,  $p < 0.01$ ), teachers ( $r = 0.199^{**}$ ,  $p < 0.01$ ) and peers ( $r = 0.199^{**}$ ,  $p < 0.01$ ).

## Discussion

The current research has identified five components of EAP learners' emotional engagement. They were coded as *enthusiasm for*

*academic English, appreciation for teachers, satisfaction with school environment, positive feelings with peers and aversion to learning academic English.* The multifaced nature of emotional engagement suggests that many internal and external variables of learners influence their emotions in learning. Learners show relatively higher level of emotional engagement toward external factors such as their school environment, teachers, and peers, because they feel related and connected with their social surroundings. Those who reported belongingness to school showed greater emotional and behavioral engagement (Furrer and Skinner, 2003). These findings are in alignment with previous research (Fredricks, 2011) which has pointed out student engagement is higher when they have a good relationship with their teachers and peers. Teachers and peers are those with whom they are interacting in their daily life. Such interaction contributes to a strong sense of belonging to the classroom and the school. According to sociocultural theory, emotions don't come out of vacuum. They are interpersonal and socially constructed (Swain, 2013). Previously studies have also found that learners who have good interactions with their lecturers could report more emotional engagement than those who have a poor relationship (Sagayadevan and Jeyaraj, 2012). Good relationship between learners and teachers or peers provide confidence and security for their learning. Having a feeling connecting with the school, supportive relationship from teachers and close friendship with peers are all contributing to their emotional engagement. Therefore, it is concluded that learners' emotional engagement is interrelated with the sociocultural environments. School climates, teachers, peers, and other cultural elements all have an impact on their emotional engagement in learning.

Moreover, participants' feelings toward the course are negative because many learners reported English for Academic Purposes is not relating to their future job. They will not use academic English in their future work. Although they recognize the purpose of this course and feel satisfied with the outside learning atmosphere in the university, they feel less eager to learn or withdrawn from EAP. Relatedness is the antecedent for learners' engagement (Ryan and Deci, 2000). Learners' perception of relevance and usefulness is influencing their engagement in learning (Schmidt et al., 2020). Learners are not passive recipient of learning, but an agentic performer to determine what they are learning and how they will learn it. Positive or negative emotions come up through this process. When learners perceive the course is not relevant and less valuable to their development, there will be more negative emotions as is shown in the survey. Consequently, they will not positively emotionally engage in the learning although they might behaviorally conform to the course requirement.

In this provincial university, it is the administration which has required the EAP program should be carried out in the whole university. This contrast between learners' higher emotional engagement in the environment and lower willingness to learn would exert negative influences on learners' behavior and cognition. Some of them reports negative emotions such as anxiety, boredom, and frustration with EAP learning. To some extent, this phenomenon also reflects one characteristic of Chinese culture, namely a high acceptance of power and authority. Teachers and administrations are the authorities. Students have been accustomed to the teacher-centered learning practices and the teacher sets the emotional tone in foreign language classes (Li, 2019). This

TABLE 4 Learners' language proficiency.

	N	Max.	Min.	Mean	SD
Score	399	92	28	68.1	11.46

TABLE 5 Correlation between factors of emotional engagement and language achievement.

	Score	EAE	SSE	AT	AAE	PPF
Score	1					
EAE	0.012	1				
SSE	-0.044	0.637**	1			
AT	-0.001	0.589**	0.681**	1		
AAE	0.189**	0.344**	0.252**	0.199**	1	
PPF	-0.031	0.670**	0.699**	0.645**	0.199**	1

\*\* $p < 0.01$  (two tailed). \* $p < 0.5$  (two tailed).

phenomenon also proves that the dynamics of social and contextual factors interplay with learners' emotional engagement. Emotions are mediated with culture. "The emotional experience arising from any situation or any aspect of his environment determines what kind of influence this situation or this environment will have on the child" (Vygotsky et al., 1994: 339). Emotional engagement does not happen from vacuum but rather they are socially and culturally constructed. The influence of school environment on learners' language achievement is mediated through their negative emotions. Therefore, it is essential to understand the contexts and social settings of engagement on task and to recognize the complexity and the multifaceted nature of engagement as a meta-construct (Philp and Duchesne, 2016).

Among these components of learners' emotional engagement, learners' negative emotion—aversion to academic English were found to be the only one relevant to their language achievement. The negative emotions include anxiety, frustration and boredom. Most studies on anxiety have reported negative influence on language learning because it affects learners' willingness and motivation (Horwitz, 2001; Arnold, 2011). Anxiety might have a source of learners' boredom or lack of interest, which is considered as a sufficient condition for disengagement (Skinner et al., 2009). Boredom is the unpleasant emotion associated with low cognitive arousing and action tendency (Goetz et al., 2014). In this study, learners reported they felt much challenge with EAP course because it involves more complicated vocabulary and discourse. This made them feel frustrated. Some of them were not interested in this course. Since it was a compulsory course, learners might pretend to comply with the school normality but not intrinsically involve in the learning process. This will lead to undesirable learning outcome. As was described by Mercer (2019), disaffected learners passively comply to fit into the expectations of school norms, but they are not authentically and intrinsically engaging in their school work. Therefore, these negative emotions have an impact on learner language achievement.

Learners' positive feelings toward the course, teachers, peers and school environment were not found to be related with their language achievements in the study. Particularly, learners' appreciation for teachers (AT) which had the highest mean (4.57) displayed no correlation. This highlights that there is disconnection between learners' positive biases (e.g., teacher admiration) and predictivity of their achievements. Nevertheless, the data showed that the five components of emotional engagement were significantly positively associated. The interconnection among these components is complex and dynamic. Learners' feelings toward the external stimuli might indirectly influence learner achievement through internal stimuli. Furthermore, one emotion alone might not significantly influence learners' language achievement. To achieve language proficiency involves a multitude of emotional engagement. The current study could provide some evidence on the role of emotional engagement in relation to language achievement rather than other learning outcomes.

## Pedagogical implications

First and foremost, emotional engagement is of great significance for EAP learners. If they did not have the willingness,

interest, or other positive emotions toward English, they would not engage in the learning process behaviorally and cognitively. Teachers should make some attempts to provide more emotional scaffolding with learners and thus more engagement in class activities.

Secondly, learners' emotional engagement is interconnected with the learning context. Teachers and administrators should become aware of providing better services and creating an active learning atmosphere to promote learners' engagement. Adequate affordances from school environments can improve learner engagement. According to the positive psychology research in second language acquisition (Dewaele, 2005), it is proved that the more positive emotions, the better students' performance. Teachers are suggested to take record of learners' feelings toward English learning regularly to provide effective interventions and support. These practices will help better understand and enhance engagement among their learners.

Finally, it is worthy to note learners' negative emotions toward EAP course in key provincial universities were significantly related to their language achievement, while the course was compulsory. When carrying out curriculum reform and instructional policies, administrators and teachers should adhere to the bottom-up process, taking learners' needs into consideration rather than a top-down implementation. EAP course should cater to those students who are really interested in academic English learning or those who relate their future job with academic English. Learners' needs and their sense of relatedness is an important contributor to their academic engagement.

## Limitations and suggestions for future studies

This research has provided a nuanced understanding about the constitutes of emotional engagement among EAP learners in the key provincial universities in China. The findings articulate the complexity and contextual nature of emotional engagement. There are still some limitations which imply further studies in the future. First, the sample from particular institutions favors specific analysis of emotional engagement but restricts the generalization of the findings. learners' emotional engagement is measured at the course level with a self-report survey. Emotions at the task or activity level are also important for fully comprehending learner engagement, although emotions are elusive and instant, which causes difficulties of measurement. Future studies may adopt modern techniques monitoring facial expressions or other biological indicators to describe learners' instant emotional states. Second, learners' language achievement is assessed through their final tests. Although the final test could reflect whether learners have engaged in the course learning, there would be some students who crammed up before testing. Future research when measuring learners' achievement could include other learning outcomes or learner development. Finally, the present study calls attention to the underlying structure of learners' emotional engagement in the

specific language learning situation interrelated with contextual factors. Future studies are suggested to explore further about these specific factors.

## Data availability statement

The original contributions presented in this study are included in this article/supplementary material, further inquiries can be directed to the corresponding author.

## Author contributions

JL: Conceptualization, Data curation, Methodology, Investigation, Writing – original draft, Writing – review & editing, Visualization, Formal analysis. ZZ: Supervision, Writing – review & editing.

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