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Exploring the Factors Influencing Student Engagement in University English Classes

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This study investigated student engagement by conceptualizing learning engagement and examining the inner mechanism that operates in the university English learning context. This study administered a questionnaire to 376 college students, and data analysis was conducted with SPSS 26.0 and AMOS 24.0. The findings revealed that student engagement can be conceptualized into behavioral, cognitive, affective, and interactive engagement. The results confirmed that cognitive engagement positively affected behavioral engagement, whereas affective engagement did not. Affective engagement had positive effects on both cognitive engagement and interactive engagement. Interactive engagement positively affected cognitive engagement but did not affect behavioral engagement. Further, the results showed that cognitive engagement acted as a full mediator between affective engagement and behavioral engagement, as well as between interactional engagement and behavioral engagement. The findings of this study propose implications for optimizing English teaching to facilitate student engagement and ultimately enhancing their learning satisfaction along with improving academic outcomes.

Key words: student engagement, dimensions, inner mechanism, English learning

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1. INTRODUCTION

Student engagement in academic context has received much attention among scholars and educators for its potential to enhance learning (Taylor & Parsons, 2011), academic performance (Reschly & Christenson, 2012), persistence in conduct (Lam, Wong, Yang, & Liu, 2012), and school completion (Finn, 1989). It is a way to describe learners who display heightened level of involvement in language learning (Dörnyei & Kormos, 2000). Engagement is instrumental in foreign language learning settings, and it mediates the relationship between learning anxiety and English achievement (Mekki, Ismail, & Hamdan, 2022). Nasrollahi Shahri (2018) found the intersection of language engagement and learners' identity in EFL context based on the concept of voice. It reveals how the participants invest in two different voices that index their efforts toward the construction of a second language. The degree to which language learners are fully immersed plays a crucial role in the development of their language skill (listening, speaking, reading, writing), and even in the entire academic career (Skinner & Pitzer, 2012). Therefore, enhancing student engagement is the core of teaching and it is the prerequisite for ensuring EFL teaching and learning effectiveness. Due to this, researchers have persistently strived to identify vital factors contributing to "engaged" and the impact on learning development and academic achievements.

The initial exploration into learning engagement primarily started from examining individual student academic progress, with a particular focus on preventing dropout, later a growing interest in engagement was burgeoning as a fundamental concept to understanding learning success and behavior of all students (Fredricks, Blumenfeld, & Paris, 2004), extending beyond the initial emphasis on dropout prevention. There are essentially three schools of thought on student engagement: one arising from the dropout and intervention area (Finn, 1989), another from a more general school reform perspective (i.e., National Research Council), and the third, arising out of the motivation literature (e.g., Skinner, Furrer, Marhand, & Kinderman, 2008). However, in recent years, research mainly focuses on student engagement from instructional contexts, social relatedness contexts, and personal factors, such as goal orientations, self-efficacy and basic need satisfaction. Seldom research focuses on exploring the relationship of the indicators and the inner mechanism of student engagement.

In EFL learning context, teachers attempt to help students develop English skills by repeatedly practicing in meaningful ways, with realistic and comprehensible input and output (Newton & Nation, 2020). This amount (quantity) and type (quality) of practice in English learning tasks or activities embody the essence of engagement. However, the significant progress and widespread application of AI technologies, the prioritization of Chinese in students' epistemology and the aspirational anticipation for Chinese as Lingua

Franca may all be associated with diminished motivation in English learning. Student engagement in EFL context, even falls into the dilemma of formal buzz but substantive ineffectiveness, specifically in higher education contexts where self-learning is of great importance. For instance, students attend class and complete the work, but with little indication of excitement, commitment, or self-actualization in mastery of the curriculum, and even unwilling to communicate. Particularly, in the regard of teachers, the lack of teacher support would impede EFL students' absorption and interaction to a great extent as well. For example, teachers do not offer more occasions for students to develop a metacognitive awareness of their ongoing learning (Byram, 2012); do not stimulate their willingness to communicate (MacIntyre, Baker, Clément, & Donovan, 2003); and neglect their affective factors (Ehrman, 1993) that may mediate development especially when learning is embedded in interpersonal transaction. Therefore, student disengagement or the seemingly being engaged results in a certain disparity between the expected and actual effectiveness of learning and teaching. While there are some students who are little motivated or disengaged in learning, educators and researchers can foster heightened involvement through the implementation of pedagogical strategies and scrutiny of the inner mechanism governing student engagement.

To foster student engagement in English learning, the concept of Community of Practice (CoP) giving impetus to the diversified field provides a helpful perspective. The term CoP has an antecedent in the expression 'community of practitioners' (Constant, 1984). Lave and Wenger (1991) argued that learning does not rest with the individual but is a social process which involves a group of individuals who share mutually defined practices, beliefs, and understandings while working towards a common goal (Wenger, 1998). Community of practices emphasize the importance of activity in connecting individuals to communities, and of communities to validating individual behaviors. Later Wenger (1998) applied CoP—a model for SLA research in educational settings. Three characteristics of CoP were posited: mutual engagement, joint enterprise, and shared repertoire. Nagao (2018) examined the validity and significance of treating the EFL classroom as a CoP, as its several elements are inherent to the EFL classroom such as broad student participation, collaborative group work, and practice within groups in authentic and meaningful contexts. In addition, educators advocate the transition from English as a General Purpose (EGP) teaching to English as a Specific Purpose (ESP) teaching to expect to enhance non-English majors' interest and engagement by relating English learning to their competence need. Brown (2014) highlights a notable omission in the field of student engagement in EFL contexts by pointing out the absence of the term 'engagement' from the glossary, a section usually reserved for key technical terms, especially in SLA and EFL contexts.

In addition, most engagement studies have not fully covered the multidimensional nature of the construct, which encompasses behavioral, cognitive, and affective components (Wang

& Peck, 2013). Moreover, there are relatively few studies focusing on engagement within higher education context (Zumbrunn, McKim, Buhs, & Hawley, 2014).

Based on the systematical investigations on the problems of insufficient college student engagement in English learning, this study aims to clarify conceptualizations of the connotation of student engagement, elaborates on structural dimensions, explores the correlation among them by constructing a structural model, and finally explains the internal mechanism to promote developmental dynamics of college student engagement. This study can shed new light on the measurement of student engagement in comprehensive aspects and offer some important insights into English learning and teaching effectiveness in practice. To address those issues, some questions need to be considered, such as 'how to interpret and define student engagement scientifically and comprehensively,' 'how to clarify its structural dimensions and the mechanisms of their interactions,' and 'how to develop a dynamic and durable engagement process in English learning.' With the need for this research, the current researchers have raised specific questions as follows:

1) What are the university students' individual differences of the perceptions of engagement in EFL learning context?
2) What are the internal mechanisms among the components of student engagement in the EFL learning process?

2. LITERATURE REVIEW AND HYPOTHESIS

2.1. Definition of Student Engagement

Student engagement refers to students' active involvement and commitment to educational goals in educational practices. It is an essential pathway to highly valued educational outcomes (Christenson, Reschly, & Wylie, 2012). It features as energized involvement by continuous effort, strong likings or interest, proactive attempt to learn and in-depth thinking with academic tasks. To put it another way, engaged students are those who participate actively in class and school activities, become involved cognitively in learning, develop and maintain fully a sense of school belonging, and demonstrate appropriate or productive behaviors. All of these behaviors promote the likelihood of school success.

One concern related to the conceptualization of student engagement is whether engagement should be defined narrowly or broadly. To enhance the understanding of the term and pave the way for effective class interventions, it is essential to establish clear concepts and elaborate on the key indicators of student engagement. According to the

literature, those who prefer a broad, inclusive definition of engagement seem comfortable including psychological concepts, such as affect, liking, feelings of belonging, and valuing. In contrast, Skinner and Pitzer (2012) preferred a restricted definition of engagement, such as "the behavioral manifestation of motivation." Finn and Zimmer (2012) also seemed to prefer a more limited notion of engagement that focuses on behavior (both overt and covert mental behaviors). Overall, in a narrow sense, student engagement is limited to behavioral involvement, while in a broad sense, it is regarded as multidimensional or meta-construct. Therefore, there are some indicators showing the internal features or descriptive parts inside the construct of engagement. It features several distinct, but highly intercorrelated, aspects.

The following presents four dimensions of student engagement along with explanations for each dimension and their respective sub-dimensions. First, *behavioral engagement*. It is most commonly defined in three ways: 1) positive conduct, such as following the rules and adhering to classroom norms, as well as not skipping school and not getting in trouble (Finn, 1993; Finn & Rock, 1997); 2) involvement in academic tasks, such as effort, persistence, attention, asking questions, and contributing to discussion (Skinner & Belmont, 1993); 3) participation in school-related activities, such as athletics or school governance (Finn, 1993). The positive behaviors contribute to students grades and teaching context, such as on-task concentration (Reeve, 2012), expending effort and task persistence (Miller, Greene, Montalvo, Ravindran, & Nichols, 1996), discussing schoolwork with other students (Patrick, Ryan, & Kaplan, 2007), and seeking help when needed (Ryan & Pintrich, 1997).

Second, *affective engagement.* It refers to task-facilitating emotions such as interest, boredom, happiness, sadness, and anxiety (Connell & Wellborn, 1991; Skinner & Belmont, 1993). Some researchers regard affects as emotional reactions to the school and the teacher (Lee & Smith, 1995), whereas Finn regards identification and an appreciation of success in school-related outcomes as affective subdimensions.

Third, *cognitive engagement*. It involves processes such as sustained attention and mental effort, often including self-regulation, or being strategic (Fredricks et al., 2004). Some definitions focus on psychological investment in learning, a desire to go beyond the requirements, and preference for challenge (Connell & Wellborn, 1991). For example, Connell and Wellborn's conceptualization of cognitive engagement includes flexibility in problem solving, preference for hard work, and positive coping in the face of failure. These definitions are quite similar to constructs in the motivation literature, such as motivation to learn (Brophy, 1987) and goal orientations (Ames, 1992).

Finally, *interactive engagement* refers to the mutual communication between teachers and students. It is often contrasted with lecture-based approaches where the primary mode of instruction is a one-way flow of information from the teacher to the students. Reeve (2013) proposed the concept of agentic engagement emphasizing student-initiated, proactive and transactional type of engagement. For example, students tell the teacher what they like and

what they don't like, and students offer suggestions about how to make the class better. In addition, Finn and Zimmer (2012) mentioned social engagement containing interacting appropriately with teachers and peers. Both agentic engagement and social engagement are generally related to interaction between teachers and learners.

2.2. Constructs of Student Engagement

With enthusiasm for the notion of engagement growing, what makes student engagement unique and complex is its potential as multidimensional or meta-construct (Appleton, Christenson, & Furlong, 2008; Fredricks et al., 2004). However, throughout the studies, there is a lack of consensus in both conceptual and subtypes of student engagement, hence student engagement studies suffer from confusing terminology and vague conceptual definitions. This is partly due to the complexity and contextuality, and partly due to the different perspectives of the research. Hence, it is crucial to comprehend the variety of classifications of engagement dimensions as described by various researchers. This understanding will guide the determination of four constructs in this study. There is agreement that at a minimum, student engagement constitutes participatory behavior and some affective component. Other scholars add cognitive engagement (Appleton, Christenson, Kim, & Reschly, 2006; Christenson & Anderson, 2002; Fredericks et al., 2004). However, most studies have analyzed and defined the structural dimensions of student engagement from a psychological perspective, based on measures of learning persistence (Berger & Milem, 1999), satisfaction (Filak & Sheldon, 2008), and learning achievement (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2007), with less research focusing on the learner's process and learning experience.

In recent years, it has been generally accepted that at least three components are central: behavioral engagement, affective engagement, and cognitive engagement. In the domain of language learning, Svalberg (2009) posited social engagement is essentially linked to interaction and to learners' initiation and maintenance of it. Thus, we believe that interactive dimension is another crucial additional component of engagement. Overall, in this work, behavioral, cognitive, affective, and interactive engagement are covered. Moreover, some disagreement on whether engagement is perceived and assessed on a single continuum or whether engagement and its counterpart, are treated as separate continua. Although some scholars measure both engagement and disengagement, we measured engagement on a single continuum ranging from low to high in this study.

Besides, in higher education context, the impact of college is largely determined by individual effort and involvement in the academic, interpersonal, and extracurricular offerings on campus. However, numerous cultural and contextual obstacles hinder students from fully engaging with all the campus offerings (Quaye, Harper, & Pendakur, 2019).

While the relationships between engagement, student outcomes, and retention are powerful, it is important to acknowledge the conditions under which these are likely to occur. To sum up, based on the theoretical interpretation of student engagement by using a holistic, adaptive, and multifaceted perspective that reflects the individuality, sociality, and situationality of learning, this study draws on the relevant research sources of student engagement and argues that it should take into account not only the individual's psychological process, but also the impact of the learning community environment on the university EFL students. Overall, rooted in educational psychology and the language learning sciences, student engagement is reflected in behavioral, cognitive, affective, and interactive dimensions (Philp & Duchesne, 2016).

3. METHODOLOGY

3.1. Participants

The participants, all volunteers, were students at a teachers' university located in the central area of China, pursuing their studies in majors like Pedagogy, Law, Art, and Chinese Language & Literature. The total number of the participants for the four majors was 400. This survey involved the recruitment of 100 volunteers from each major, distributed evenly across four academic grades, with each grade contributing 25 individuals. Table 1 shows the demographic characteristics of the participants.

TABLE 1

Participants' Demographic Characteristics (N=376)

	Background	Number	Proportion (%)
Gender	Male	80	21.3
	Female	296	78.7
Grade	Freshman	95	25.3
	Sophomore	96	25.5
	Junior	93	24.7
	Senior	92	24.5

3.2. Data Collection

The questionnaire was conducted through an online platform Survey Star in China at the end of the first semester of 2023. The electronic questionnaire was sent by Councilors of

these departments to the participants by WeChat (a popular Chinese multi-purpose messaging, social media App) and lasted two weeks. Stratified sampling was conducted, based on academic year then randomly selected participants from each band in proportion to their grades in the overall population. The participants from the four majors for each grade were 25 students. The anonymity and confidentiality of data were guaranteed for the students who answered the questionnaire.

In the survey, 400 responses were collected and a total of 376 final copies (94%) were used for empirical analysis, excluding 24 questionnaires that did not respond faithfully or responded inappropriately, thus we regarded them as unanswered or ineffective and excluded them.

3.3. Instrument

Based on a questionnaire from previous studies, the contents of the measurement items were modified to fit the purpose and context of this study. The questionnaire consisted of two parts: (1) participants' background information such as gender, grade; (2) their perceptions of the current student engagement. In detail, to verify the research hypothesis presented in this study, the questionnaire consists of behavioral engagement (adapted from Dixon, 2010; Sun & Rueda, 2012), cognitive engagement (adapted from Ehrman & Oxford, 1990), affective engagement (adapted from Goodenow 1993; Handelsman, Briggs, Sullivan, & Towler, 2005; Horwitz, Horwitz, & Cope, 1986), and interactive engagement (adapted from Dixson, 2010; Goodenow, 1993; Kuh, 2009) as major variables. To confirm that the sample of this study describes the population characteristics of non-English major students, questions on demographic characteristics such as gender and grade were incorporated. Table 2 presents the specific items included in the questionnaire.

The Likert scale used for these items was set at a range from 1 to 5, with 1 representing "never" and 5 representing "always." The measurement items of the constructs are shown in Table 2. According to the Cronbach's Alpha value, alpha coefficient above 0.70 is considered acceptable and 0.80 or greater is preferred, indicating that higher coefficient, more desirable (Cortina, 1993). In this study, the Cronbach's alpha for behavioral engagement, cognitive engagement, affective engagement, and interactive engagement were above 0.8 which suggests that all the constructs were internally consistent and therefore was considered acceptable for this type of research.

TABLE 2

Students' Perceptions of Student Engagement

Cons.	Items		Research	Cron-bach's alpha
BE	BE1	I am able to consistently pay attention when I am taking offline English classes.	Sun & Rueda (2012)	.854
	BE2	I am able to consistently pay attention when I am taking online English classes.		
	BE3	I complete my homework on time.		
	BE4	I follow the rules and adhere to class norms.		
	BE5	I find ways to overcome difficulties and persevere in English studies.		
	BE6	I do well on the tests/quizzes.	Dixon (2010)	
CE	CE1	I have clear goals for improving my English skills and adjusting learning strategies.	Ehrman & Oxford (1990)	.884
	CE2	I monitor whether I follow the study schedule to adjust and improve my study behavior in time when I study online.		
	CE3	I notice my English mistakes and use that information to help me do better.		
	CE4	I try to find out how to be a better learner.		
	CE5	I assess and reflect on my progress in learning.		
	CE6	I try to compare and integrate my views with what I learned in the course.		
	CE7	I relate what I have learned to practice and apply it in new contexts.		
AE	AE1	I find ways to make the English course interesting to me.	Handelsman et al. (2005)	.872
	AE2	I find ways to make the English course material relevant to my life.		
	AE3	I apply English course material to my life.		
	AE4	It wouldn't bother me at all to take more English classes.	Horwitz et al. (1986)	
	AE5	Other students take my opinions seriously.	Goodenow (1993)	
	AE6	Most teachers are interested in me.		
IE	IE1	I ask questions in English class.	Goodenow (1993)	.894
	IE2	I contribute to class discussions.	Kuh (2009)	
	IE3	I work with other students on projects.		
	IE4	I participate in a community-based project as part of a regular English course.		
	IE5	I get to know teachers' and other students' opinions by discussion.		
	IE6	I engage in conversations online using English.	Dixson (2010)	
	IE7	I post in the discussion forum regularly.		
	IE8	I tutor other students to improve their English (reading and writing skills, pronunciation).		

Note. Cons. = Constructs; BE = Behavioral engagement; CE = Cognitive engagement; AE = Affective engagement; IE = Interactive engagement.

3.4. Data Analysis

The data collected for this study were analyzed using SPSS 26.0 and AMOS 24.0 statistical software. To ensure the validity and reliability of the data for exploratory factor analysis (EFA), KMO measure and Bartlett's test were employed. The KMO value was .923; the Bartlett test analysis was found to be significant ($p < .000$). Therefore, it was finally confirmed to be suitable for EFA. 60.331% of the variance in student engagement was explained by the model.

To verify the validity of the construct, confirmatory factor analysis (CFA) was performed. First, discriminant validity was confirmed by comparing the value derived from the correlation analysis with the average variance extracted (AVE) values. It was analyzed by converting the r value derived through correlation analysis into r^2 and comparing it with the AVE value. The square root of the AVE for each dimension (AVE = .734, .723, .758, .739) is greater than the absolute value of the maximum correlation coefficient with other factors, confirming discriminant validity. Second, for convergent validity, all construct reliability (CR) was found to be higher than the standard value of 0.7, and all AVE values were shown to be higher than the standard value of 0.5, confirming the convergent validity for the data. Finally, the significance level ($p < .05$) showed a significance probability (.000) that was significant in all variables.

This study began by evaluating the reliability and validity of the constructs. Following this, a descriptive analysis was conducted to explore students' perceptions of engagement. The current situation of English learning engagement of the university in central China was reflected by this analysis. Subsequently, Mann-Whitney U test and One-way Analysis of Variance analysis were conducted to assess engagement based on gender and academic year, aiming to identify potential differences in these two factors. Gender and academic year, as essential factors indicating individual differences, could potentially exhibit significant differences in learning engagement. Following this, the correlation analysis was performed to show the relationship among the four constructs. Finally, in order to further evaluate complicated causal correlations, a path analysis of the hypothesized structural equation model (SEM) was performed.

4. RESULTS

4.1. Current Situation of Student Engagement

4.1.1. Overall perceptions of student engagement

In the questionnaire, the elevated scores correspond to the heightened degrees of student approval, indicating a higher degree of agreement. The higher the score, the higher the student approval degree, and a stronger level of agreement. As shown in Table 3, a mean score (M = 3.25) indicates that the majority of respondents had the inclination towards approving their engagement in the learning process. Consequently, student engagement of this university was at a moderate level.

TABLE 3

The Overall Perceptions of Student Engagement

Items	*N*	Min	Max	*M*	*SD*	Median
BE	376	1.20	4.80	3.22	.847	3.20
CE	376	1.28	5.00	3.25	.840	3.28
AE	376	1.20	5.00	3.25	.888	3.20
IE	376	1.00	5.00	3.28	.863	3.28
SE	376	1.20	4.75	3.25	.617	3.25

4.1.2. Student engagement by gender and academic year

In this study, the sample data were stratified by gender, and subsequently, the independent-samples Mann-Whitney U test was employed to analyze the differences in the levels of each dimension of student engagement among non-English majors based on gender. As Table 4 presents, female students showed a higher perception of engagement (M = 3.29) compared to their male counterparts (M = 3.12) across the four dimensions of engagement. Notably, there was a significant relationship between gender and interactive engagement (z = 1.987, p = .047).

TABLE 4

Student Engagement by Gender

	Male (n = 80)		Female (n = 296)		*z*	*p*
	M	*SD*	*M*	*SD*		
BE	3.06	.863	3.26	.839	1.702	.089
CE	3.14	.860	3.28	.834	.721	.471
AE	3.14	.928	3.28	.876	.880	.379
IE	3.13	.863	3.32	.859	1.987	.047*
SE	3.12	.625	3.29	.611	1.729	.084

* p < .05

A One-way Analysis of Variance (ANOVA) was conducted to examine the potential differences among samples of various academic years in terms of the four engagement dimensions. As shown in Table 5, no statistically significant difference (p > .05) was observed in behavioral, affective and interactive engagement dimensions across different academic grades. Nonetheless, there was a significant difference in the case of cognitive

engagement (F (3, 372) = 3.342, $p < .05$). Subsequent Turkey post hoc analysis revealed that juniors exhibited significantly higher levels of cognitive engagement compared to freshmen.

TABLE 5

Student Engagement by Academic Year

	Freshman		Sophomore		Junior		Senior		*F*	*Sig.*	*Post hoc*
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	(3, 372)		
BE	3.08	.876	3.23	.792	3.23	.910	3.33	.800	1.356	.256	
CE	3.05	.796	3.25	.792	3.43	.913	3.26	.826	3.342	.019*	Ju > Fr
AE	3.24	.858	3.18	.858	3.37	.937	3.20	.911	0.826	.480	
IE	3.15	.962	3.28	.814	3.36	.866	3.33	.796	1.098	.350	
SE	3.12	.670	3.24	.545	3.35	.654	3.28	.578	2.294	.078	

* $p < .05$; Ju = Junior, Fr = Freshman

4.1.3. Correlation analysis of student engagement

To examine the inner relationships among the four dimensions, Pearson Correlation Analysis was used to explore how the four dimensions of engagement were interrelated. As shown in Table 6, the correlation coefficient between behavioral engagement and cognitive engagement displayed the highest, followed by the correlation between affective engagement and interactive engagement. Conversely, the correlation coefficient between behavioral and affective engagement, as well as behavioral and interactive engagement were relatively lower. This suggests that affection does not directly or automatically impact students' behaviors and students involved in class or online learning do not always mean that they have the willingness to interact with peers and teachers.

TABLE 6

Correlations Among Four Constructs

	BE	CE	AE	IE
BE	1			
CE	.419**	1		
AE	.271**	.350**	1	
IE	.276**	.349**	.416**	1

** $p < .01$

4.2. Hypothesis Test

4.2.1. Analysis of model fit

For the adequacy of the research model (Figure 1), a ratio of x^2/df less than 3 (Tabachnick, Fidell, & Ullman, 2013) and RMSEA below 0.08 indicate a good fit (MacCallum, Browne,

& Sugawara, 1996). The values of GFI, NLI, TLI and CFI greater than 0.90 are generally accepted (Hooper, Coughlan, & Mullen, 2008) and RMR below 0.05 is acceptable fit (Rong, 2010). Table 7 shows *p* (.000), x^2/df (309.696/246 = 1.259), GFI (.936), NFI (.931), CFI (.985), and RMSEA (.026), collectively affirming the favorable fitness of the model.

FIGURE 1

Research Model

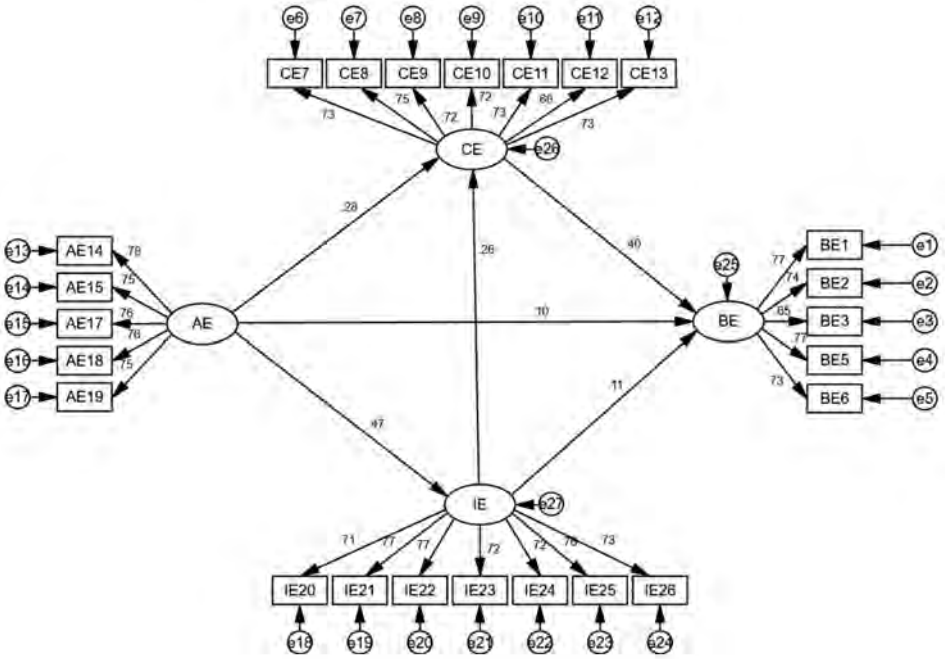


TABLE 7

Model Fitting Index

Common Index	CMIN/DF	RMSEA	RMR	GFI	NLI	TLI	CFI
Criteria	< 3	< .08	< .05	> .90	> .90	> .90	> .90
Value	1.259	.026	.039	.936	.931	.983	.985

Accordingly, Table 8 illustrates the substantiated internal relationships among the constructs. Cognitive engagement (E = .399, $p < .05$) had a significant effect on behavioral engagement, while affective engagement (E = .096, $p = .133$) did not impact behavioral engagement. Furthermore, affective engagement exhibited a significant positive effect on both cognitive engagement (E = .272, $p < .05$) and interactive engagement (E = .442, $p < .05$). Additionally, interactive engagement positively influenced cognitive engagement (E = .271, $p < .05$), but did not significantly affect behavioral engagement (E = .117, $p = .079$). The final model and path coefficients are presented in Figure 2.

TABLE 8

Results of the Testing

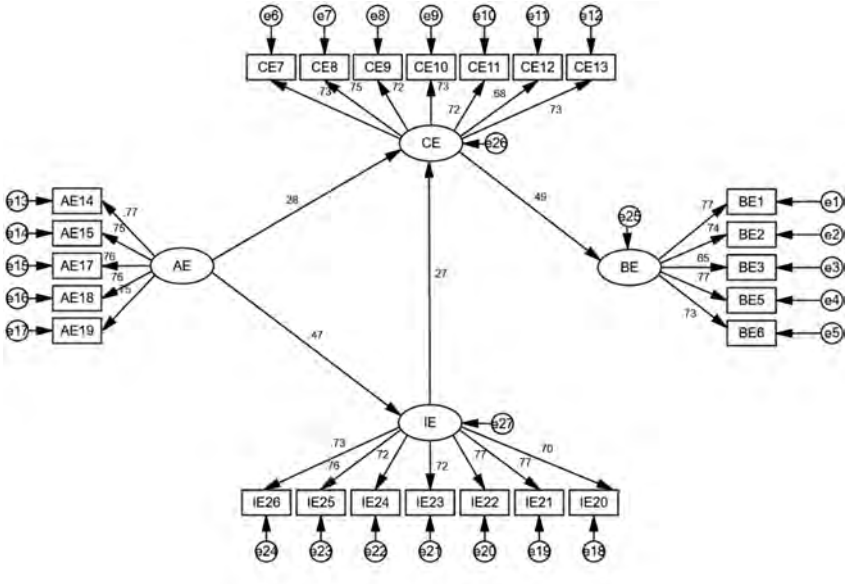
Path		Estimate	Std. Estimate	S.E.	C.R.	*p*	Results
1	BE ← CE	.399	.401	.066	6.031	***	Supported
2	BE ← AE	.096	.098	.064	1.503	.133	Rejected
3	CE ← AE	.272	.278	.064	4.269	***	Supported
4	IE ← AE	.442	.470	.058	7.575	***	Supported
5	BE ← IE	.117	.113	.067	1.757	.079	Rejected
6	CE ← IE	.271	.261	.067	4.038	***	Supported

x^2/df = 309.696/246 = 1.259, GFI = .936, NFI = .931, CFI = .985, TLI = .983, RMSEA = .026

*** $p < .001$

FIGURE 2

Final Model and Path Coefficients



4.2.2. Analysis of the mediation effect

Table 9 presents the analysis of the mediation effect, showing that cognitive engagement does not have a direct effect either between affective engagement and behavioral engagement or between interactive engagement and behavioral engagement. Consequently, the two paths (AE=>CE=>BE and IE=>CE=>BE) suggest that cognitive engagement functioned as a full mediator between affective engagement and behavioral engagement, as well as between interactive engagement and behavioral engagement. Furthermore, interactive engagement both had a direct effect (Estimate = .283) and an indirect effect (Estimate = .125) between affective engagement and cognitive engagement. Thus, the path AE=>IE=>CE indicates that interactive engagement acted as a part mediator between affective engagement and cognitive engagement. Given the significance of cognitive engagement, teachers should strategically optimize resource and task design in teaching practice, aiming to inspire learners to actively employ various learning and metacognitive strategies for constructive inquiry. This can facilitate in-depth processing of knowledge and resources by students, fostering autonomous exploration, and enhancing higher-order thinking abilities through task exploration and problem-solving processes. Likewise, recognizing the importance of interactive engagement, teachers should conduct diverse learning activities and provide enough teaching support. Guiding students to actively participate in interactions, especially peer interaction, and facilitating social dialogues, group collaborations become essential. The multifaceted methods not only promote deep engagement but also enhance learning performance, contributing to overall effective teaching and learning outcomes.

TABLE 9

Results of Mediation Effect

Path	Effect type	Estimate	Lower	Upper	*p*
AE=>CE=>BE	Direct Effect	-	-	-	-
	Indirect Effect	.140	.070	.228	.001
	Total Effect	.140	.070	.228	.001
IE=>CE=>BE	Direct Effect	-	-	-	-
	Indirect Effect	.132	.060	.221	.001
	Total Effect	.132	.060	.221	.001
AE=>IE=>CE	Direct Effect	.283	.146	.412	.001
	Indirect Effect	.125	.060	.201	.001
	Total Effect	.408	.284	.518	.001

5. DISCUSSION

This study presents that student engagement contains four distinct and highly intercorrelated constructs. Firstly, an analysis was conducted on the perceptions of student engagement in various dimensions in English learning context. The results suggest that student engagement in English learning at this university in central China is at a moderate level. Specifically, female students consistently outperform their male counterparts across all four dimensions. This aligns with a previous study (Lam et al., 2012) suggesting that, compared to boys, girls report higher levels of engagement in school and were rated higher by their teachers in academic performance, and girls demonstrated greater activation of language areas (Burman, Bitan, & Booth, 2008). Apart from achieving higher scores in all four dimensions in girls, a noteworthy correlation between gender and student engagement in the dimension of interactive behavior was observed. Given that language learning often requires proficient language expression skills, it is plausible that if girls possess greater confidence or talent in language, they may be more inclined to engage in language interactions. Secondly, this study also identifies distinctions in engagement across academic years. Results show that juniors excel in cognitive engagement, surpassing students in the other three grades. Post hoc analysis further reveals a significant cognitive engagement advantage for juniors over freshmen. Juniors, having acclimated to the college environment, academic expectations, and the specific requirements of their major, notably demonstrate a heightened ability to identify suitable methods and strategies for their academic pursuits.

Moreover, based on the Pearson correlation analysis, behavioral engagement and cognitive engagement are the most highly correlated. Behavioral engagement serves as a precursor to cognitive engagement. When students attend class regularly, complete assignments, and participate in activities, they create opportunities to become more cognitively engaged and are more likely to grasp and retain knowledge, develop critical thinking, and achieve superior learning outcomes. Additionally, the correlation between affective engagement and interactive engagement ranks as the second highest. Emotion is likely the fuel for communication in classroom, especially for English speaking class. Being hopeful, brave, optimistic, confident, and resilient can help English learners to cope with and minimize stress, kill shyness and dare open the mouth to communicate. When students harbor a positive emotional connection to the subject matter, feel motivated and interested, they are more inclined to actively engage in interactive learning activities, such as sharing ideas and collaborating with peers. Meaningful interactions with teachers and peers contribute significantly to enhancing student affective engagement. Engaging in discussions, receiving constructive feedback, and experiencing successful collaboration collectively boost students' confidence, sense of belonging, and enthusiasm for learning.

The Structural Equation Model (SEM) reveals the relationships of the dimensions within

learning process. Firstly, cognitive engagement significantly affected behavioral engagement, whereas affective engagement did not. When cognitive engagement is high, learners are actively involved in thinking, analyzing, and making connections with the learning material. This mental involvement can influence behavioral engagement in some ways. It lays the foundation for behavioral engagement by fostering intrinsic motivation, a sense of competence, curiosity, and critical thinking skills, and vice versa. That is to say, when learners are actively thinking and processing information, they are more likely to exhibit positive behaviors that contribute to a deeper and more meaningful learning experience. In the English learning context, as English is learned as a foreign language in China and is not learned in a natural English-speaking environment, it is more difficult for learners to acquire English naturally and implicitly. Thus, learning English requires students to consciously and cognitively pay more attention to the formal features of the language to acquire language skills. This mindful learning can ensure students to be engaged cognitively. In addition, it is important to note that affective engagement impacting on behavioral engagement varies depending on individual differences and the specific context, with cognition acting as an intermediary. Task value, for example, emerges as a factor influencing behavioral engagement to a large extent.

Secondly, affective engagement had a positive effect on cognitive engagement which is aligned with the previous studies (Clore & Huntsinger, 2009; Xu, 2020). As cognitive theorists posit that emotions serve as sources of value originating in cognitions. Affect shapes cognitive processes, such as perception, cognitive problem-solving, decision-making, and memory processes. Affective engagement also positively effects interactive engagement. The affective component, in the Participation-Identification Model, equals “identification”, and is associated with a range of psychological and behavioral outcomes. Therefore, affections are both the glue and the gunpowder of social relations (Oatley & Johnson-Laird, 2014). Thirdly, interactive engagement affected cognitive engagement. When individuals interact with teachers, peers and participate in a language learning context actively, it stimulates their cognitive functions, such as thinking critically, analyzing the problems in different aspects, and making the learning content connections with their real life. Interestingly, interactive engagement does not significantly affect behavioral engagement, contrary to a previous study (Lane & Harris, 2015). This disagreement indicates the multifaceted nature of behavioral engagement influenced by factors like instructional context, specific interactive strategies, and most importantly, learners’ personalities. Finally, the findings confirm that cognitive engagement plays a full moderating role in the relationship between affective engagement and behavioral engagement. In English classrooms, teachers should further stimulate students to apply learning strategies and metacognitive strategies for active exploration, thereby improving learning effectiveness.

6. CONCLUSION

In English teaching practice, teacher support is a critical factor in intervening student engagement. Teachers adequate support to fill students' needs for autonomy, relatedness and competence can foster their engagement. To tailor an effective methodological approach for intervening in engagement in English classes, it is crucial for teachers to leverage specific strategies that target the inner mechanisms of the four constructs. The foremost focus should be on shaping students' affective engagement by nurturing a positive attitude, motivation, and emotional connection to the language. Students are more interested in English relating to their majors. The more practical value of English they find, the more learning interest they have, and the more willing to be engaged. Therefore, ESP teaching for non-English majors should be advocated. ESP tailors English teaching to the needs of students in a particular profession or academic discipline. It can equip individuals with English skills necessary for their specific area of expertise. For instance, creating English business simulation negotiation training activities for business majors, and simulating court for international law majors. Moreover, teachers should find a balance between the difficulty of language tasks and students' abilities, because students are willing to be engaged in activities that are challenging enough to evoke a sense of focus and concentration but not so difficult that it becomes overwhelming. Hence, interest, enthusiasm, along with the suitable language-tasks can make a kind of flow.

An effective strategy to promote student cognitive engagement is think-aloud. Readers make their thinking processes explicit by verbalizing their thoughts. This can be valuable for helping develop reading comprehension skills and encouraging metacognition to become a more effective reader. Moreover, to foster interactive engagement, teachers should support students who share a common interest or passion to form a CoP and further promote them to engage in collective learning. The members of a CoP come together to share knowledge, experiences, and best practices related to their shared domain. CoP makes students display a willingness to communicate (WTC) as they tackle English tasks. WTC is a way to avoid unwillingness to communicate or get rid of what we commonly label as "shyness".

The findings of this study have the implications for measuring student engagement and identifying the role of the relationship path in the process of English learning context in university. However, as with any research, this study has limitations. Motivation is seen as the underlying source that fuels engagement. To further explore how motivation impacts engagement would make the present study more comprehensive. In addition, this study has limitations in generalization because it is limited to only four non-English major students in a normal university in central China. Moreover, the detailed subgroup analyses for gender and academic year were not conducted in this study which could provide deeper insights into the relationships that exist within the broader context of student engagement. Therefore, it is

planned to explore these variables in more detail in subsequent studies, employing advanced SEM techniques to uncover more specific patterns and influences. This future research will expand upon the findings presented in this paper, offering a more granular understanding of how different factors impact various student demographics.

In conclusion, this study reveals the internal mechanisms of the four engagement constructs within a university EFL teaching context. By doing so, it provides valuable direction for teacher support, aiming to optimize teaching practices that facilitate student engagement. This, in turn, is anticipated to enhance student satisfaction with the learning process and improve academic outcomes. Therefore, the insights obtained from this study not only contribute to a deeper understanding of engagement dynamics in EFL settings but also offer practical guidance for educators seeking to foster a more effective and satisfying learning environment.

Applicable level: Tertiary

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