


# Chinese Pre-University Teachers' Foreign Language Anxiety, Teaching Anxiety, and Teacher Self-Efficacy

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## ABSTRACT

This study examined the relationships among Chinese pre-university teachers' foreign language anxiety, teaching anxiety and teacher self-efficacy. The participants were 210 Chinese primary and secondary English teachers who completed a battery of questionnaires. The results showed that: (a) the participants reported low to moderate levels of foreign language anxiety and teaching anxiety, as well as a high level of self-efficacy; (b) foreign language anxiety directly and negatively predicted the participants' self-efficacy; (c) foreign language anxiety was a positive predictor of teaching anxiety; (d) teaching anxiety mediated the link between foreign language anxiety and self-efficacy. This study highlights the importance of addressing language teachers' foreign language anxiety and teaching anxiety, and provides insights into enhancing teachers' self-efficacy.

## KEYWORDS

EFL Teachers, Foreign Language Anxiety, Self-Efficacy, Teacher Education, Teaching Anxiety

Anxiety is a commonly experienced emotion among teachers and can profoundly affect teachers' identity, beliefs, actions, as well as students' learning (e.g., Chen et al., 2023; Goetze, 2023; Keavney & Sinclair, 1978). In foreign language (FL) contexts, Horwitz (1996) initially suggested that non-native language teachers would experience foreign language anxiety (FLA), similar to other types of language learners. Such anxious feelings about their language abilities can significantly affect teachers, including their beliefs, teaching practices, and so on (e.g., Kralova & Tirpakova, 2019; Kralova, et al., 2017). Moreover, scholars have gradually realized that language teachers deal with another situation-specific types of anxiety, namely teaching anxiety (TA) (Alrashidi, 2022; Ouastani, 2020). Teachers' worries and concerns can be aroused during teaching activities, which can impede their teaching effectiveness, emotional well-being and professional development (Parsons, 1973; Gardner & Leak, 1994; Sinclair & Ryan, 1987). Compared with the extensive research on FL learners' anxiety (e.g., Lin, 2022; MacIntyre & McGillivray, 2023), language teachers' anxiety still has not received enough attention (e.g., Goetze, 2023; Liu & Wu, 2021).

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Teachers' self-efficacy (TSE) is another key construct that influences teachers' mental health, work engagement and teaching effectiveness (e.g., Klassen & Tze, 2014; Zhang et al., 2023; Zhi et al., 2023). Teachers with high levels of self-efficacy believe in their ability to organize teaching activities and to construct positive teacher-student relationships (e.g., Tschannen-Moran & Hoy, 2001; Tschannen-Moran et al., 1998). Language teachers face various and considerable "threats" to their self-efficacy beliefs (Hoang & Wyatt, 2021), including their emotional states (Phan & Locke, 2015). Thomsson (2020) suggested that affective factors significantly impact teachers' beliefs, which may in turn influence their behaviors. Currently, the relationship between language teachers' emotion and self-efficacy beliefs remains under-explored (e.g., Deng et al., 2022; Zheng et al., 2022). Given the limited existing research (e.g., Fraschini & Park, 2021, 2022; Liu et al., 2021), the present study specifically focused on Chinese pre-university English as a foreign language (EFL) teachers and examined the relationships among their FLA, TA and TSE.

## LITERATURE REVIEW

### TFLA

FLA is a situation-specific anxiety experienced by language learners (e.g., Horwitz et al., 1986). It was defined as "a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" by Horwitz and her colleagues (1986, p.128). Horwitz (1996) suggested that foreign language teachers, as advanced language learners (Coleman & Towell, 1991), can encounter many anxiety-provoking experiences when learning and teaching the target language. Later researchers have empirically examined language teachers' FLA through questionnaires, interviews, and so on (e.g., Bekleyen, 2009; Kralova & Tirpakova, 2019; Kralova, et al., 2017). These studies have shown that language teachers worldwide experience FLA, and such feelings negatively affect teaching practices and students' learning outcomes (e.g., Liu & Wu, 2021; Tum, 2012, 2015). For example, in Tum's (2015) study of 12 Turkish pre-service EFL teachers, anxious teachers tended to avoid using the target language in teaching and overemphasized correcting students' language use errors. Similarly, Machida (2015) conducted a study with 133 Japanese elementary school English teachers. Analysis of questionnaire data revealed that more than seventy-seven percent of the participants reported anxious feelings about their language abilities. Their FLA primarily came from low confidence in using English to communicate and unpreparedness to teach English. Also, factors like teaching experience, training experience, and English proficiency could strongly influence their level of FLA. Kralova and her colleagues (2017) focused on foreign language pronunciation anxiety (FLPA) of student teachers in Slovakia and found that it was negatively correlated with the quality of the participants' English pronunciation.

However, as research on foreign language teacher anxiety progressed, it became evident that addressing teachers' language-related anxiety alone is inadequate (e.g., Fraschini & Park, 2021, 2022; Ikeda et al., 2020). The teaching-related anxiety of FL teachers has received increased attention (e.g., Alrashidi, 2022; Ouastani, 2020). For example, Fraschini and Park (2022) used Q methodology to examine Korean pre-service language teachers' anxiety. They summarized four major perspectives, including concerns about the lack of teaching experience and skills, poor work-life balance, relationship with supervisors and colleagues, and limited chances to demonstrate their creativity.

### TA

TA refers to "anxiety experienced in relation to teaching activities that involve the preparation and execution of classroom activities" (Gardner & Leak, 1994, p. 28). It could "change in intensity and may disappear with increasing experience" (Buitink & Kemme, 1986, p. 77) and exert substantial influences on teachers across disciplines (e.g., Aslrasouli & Vahid, 2014). Foreign language teaching

anxiety has been empirically studied through quantitative methods, qualitative methods, or mixed methods (Fallah et al., 2023; İpek, 2016; Ouastani, 2020). These studies primarily aimed to measure the level of teaching anxiety, explore possible influential factors, and examine the relationship between teaching anxiety and other factors (e.g., Alrashidi, 2022; Li et al., 2023; Liu & Wu, 2021). Research has shown that language teachers from different backgrounds all experience varying degrees of teaching anxiety (e.g., Liu et al., 2022; Ouastani, 2020). Aydin and Ustuk (2020a) developed the 27-item Foreign Language Teaching Anxiety Scale (FLTAS), which included five factors: self-perception of language proficiency, teaching inexperience, lack of student interest, fear of negative evaluation, and difficulties with time management. Applying this scale in a subsequent empirical study (2020b), they examined the teaching anxiety levels among 156 EFL teachers working at different educational levels (elementary, middle, high schools, and higher education institutions) in various countries such as Turkey, Russia, and others. The study revealed that participants exhibited moderate levels of students' lack of interest in classes and fear of negative evaluation. Additionally, they reported lower levels of self-perceived language proficiency, teaching experience, and difficulties in time management.

Goetze (2023) suggested that for non-native language teachers, both the language-related anxiety and the general teaching anxiety can co-exist. Further investigation is needed to explore this relationship as well as how these impact teaching practice (Aydin & Ustuk, 2020b; Liu & Wu, 2021). Liu and Wu (2021) empirically examined these two types of anxiety of 151 Chinese college English teachers. They adopted the Teacher Foreign Language Anxiety Scale (TFLAS) developed by Horwitz (2008) and the Teaching Anxiety Scale (TAS) (Parsons, 1973) as the instruments. The findings showed that the participants experienced both TFLA and TA at the same time. Their FLA primarily derived from concerns about using the target language in the classroom, while the main sources of teaching anxiety were worries about classroom instruction, maintaining work-life balance and so on. These two types of anxiety were positively correlated with each other and strongly influenced the participants' professional and personal lives.

## TSE

Berman et al., (1977) first proposed the concept of teachers' efficacy and defined it as "the extent to which the teacher believes he or she has the capacity to affect student performance" (p. 137). Bandura (1977, 1986) developed the concept of self-efficacy and suggested that TSE is a form of perceived self-efficacy. Generally, scholars have agreed on the context- and subject-specific nature of teacher self-efficacy (Bandura, 1997; Klassen et al., 2011). Research on language teachers' self-efficacy has emerged as a distinct branch of TSE studies (e.g., Liu et al., 2021; Wyatt, 2018). Wyatt (2018, p. 93) defined teacher self-efficacy as "their beliefs in their abilities to support learning in various task and context-specific cognitive, metacognitive, affective and social ways."

Empirical studies on FL teachers' self-efficacy have been conducted through questionnaires, interviews, class observations and so on (e.g. Deng et al., 2022; Hoang & Wyatt, 2021; Zhi et al., 2023). These studies have identified several factors that influence language teachers' self-efficacy, such as affective states (Phan & Locke, 2015), previous experiences (Hoang & Wyatt, 2021), language proficiency (Choi & Lee, 2016), emotional intelligence (Moafian & Ghanizadeh, 2009), emotion regulation (Deng et al., 2022), and so on. Bao et al., (2021) examined the self-efficacy beliefs of a Chinese language teacher during a 16-week online teaching project. The researchers used narrative inquiry and case study methodologies and adopted thematic analysis to analyze the data. It was shown that while both the external and internal factors could influence the participants' self-efficacy, internal factors, such as personal teaching experiences and emotional states, were considered particularly important. In Hoang and Wyatt's (2021) longitudinal mixed method study, Vietnamese pre-service EFL teachers' self-efficacy was examined. The scale developed in Tschannen-Moran and Woolfolk Hoy (2001) was utilized. The exploratory factor analysis (EFA) results revealed six dimensions of EFL teacher self-efficacy belief, such as "self-efficacy in motivational English instruction" and "self-efficacy in teaching communicative English." In addition, factors such as mastery experiences and the

role of mentor were main sources of self-efficacy; the participants' self-rated language proficiency was positively correlated with self-efficacy.

## Relationships Among TFLA, TA and TSE

The close relationship between emotion and self-efficacy beliefs have been theoretically discussed (e.g., Lohbeck et al., 2018; Thompson, 2020). Bandura (1997) suggested that affective states are a major source of one's self-efficacy. Emotions can function as a filter that influence how people interpret their competence (Burić et al., 2020). However, so far there has been limited research exploring the relationship between specific emotions and self-efficacy in FL contexts (Bárkányi, 2021; Lin, 2022; Zhang et al., 2023). Few researchers have constructed a model that incorporates the two types of anxiety of language teacher and self-efficacy. In general education research, some scholars have investigated the relationships among mathematics teachers' mathematics anxiety, teaching anxiety, and self-efficacy but reported inconsistent findings (Bosica, 2022; Unlu et al., 2017). In Bosica's (2022) study of 185 Canadian pre-service elementary mathematics teachers, mathematics teaching anxiety was positively correlated with mathematics anxiety and negatively correlated with teacher efficacy. No significant correlation was observed between mathematics anxiety and teacher efficacy. Unlu and his colleagues (2017) focused on 380 pre-service mathematics teachers and used structural equation modeling (SEM) to examine the relationships among these variables. The results showed that the participants' mathematics anxiety positively predicted mathematics teaching anxiety and negatively predicted self-efficacy.

Despite the lack of research on language teachers, previous studies on FL learners have shown a strong negative link between FLA and self-efficacy (e.g., Bárkányi, 2021; Canaran et al., 2020; Wang et al., 2021). In the meta-analysis conducted by Zhou et al. (2022), these two constructs were negatively correlated with each other ( $r = -.70$ ). Moderator analyses indicated that variables, such as school levels, FL anxiety types, and gender, did not moderate this negative association. Woodrow (2011) focused on 738 Chinese university EFL learners and found that the participants' writing self-efficacy was directly and negatively predicted by their writing anxiety. In Lin's (2022) study of 234 Chinese third language (L3) learners, the research adapted existing scales as the instruments, including the Foreign Language Classroom Anxiety Scale (FLCAS) from Horwitz et al. (1986) and the English self-efficacy scale developed by Da (2006). The regression analysis results indicated that participants' anxiety in learning the L3 negatively predicted their self-efficacy.

In addition, some educational studies show that teaching anxiety negatively affects self-efficacy (e.g., Bach & Hagenauer, 2022). For example, In Bach and Hagenauer (2022)'s study of 449 Austrian pre-service mathematics teachers, teaching anxiety imposed negative predictive effects on self-efficacy beliefs. Senler (2016) focused on 356 Turkish pre-service teachers. Path analysis results revealed that teaching anxiety not only directly negatively predicted self-efficacy, but also mediated the relationships between self-efficacy, the participants' attitudes towards teaching, and their beliefs about control of life events. Merç (2015) investigated Turkish pre-service EFL teachers and found a negative correlation between their teaching anxiety and self-efficacy.

## Research Questions

Overall, language teachers' TFLA, TA, TSE, and the relationship between them have not been sufficiently researched. Only a few studies have investigated the relationship between two of these factors (e.g., Aydin & Ustuk, 2020b; Liu & Wu, 2021; Merç, 2015). Moreover, most existing research focuses on pre-service teachers (e.g., Alrashidi, 2022; Hoang & Wyatt, 2021; Li et al., 2023). Given the significant difference between pre-service and in-service language teachers (Horwitz, 1996), it is necessary to conduct more research on in-service FL teachers (e.g., Liu et al., 2022; Zhi et al., 2023). In view of these gaps, this study aimed to explore the relationships among Chinese pre-university EFL teachers' TFLA, TA and TSE. The following research questions were formulated:

- (1) What are the levels of the participants' TFLA, TA, and TSE?
- (2) What are the relationships among the participants' TFLA, TA and TSE?

## **METHOD**

### **Context**

English is a compulsory subject in Chinese primary and secondary school education. Pre-university English teachers are responsible for teaching students fundamental language knowledge and skills, developing effective learning strategies, and fostering cross-cultural communication abilities. Some teachers also take on the role of head teachers, responsible for classroom management and maintaining close communication with students and parents. Teachers are also required to participate in various teacher training programs and teaching competitions, as mandated by the government and schools. These regularly held activities aim to promote the professional development of teachers.

To become a qualified English teacher in elementary or middle schools, the person is required to hold a relevant bachelor's or master's degree in education or English education. Additionally, candidates need to pass the teacher qualification examination which involves written and oral exams. The tests assess the examinees' knowledge of education and English teaching. Upon obtaining the teaching qualification certificate, individuals can apply for English teaching positions at schools.

### **Participants**

Altogether, 210 pre-university English teachers (19 males and 191 females) from different schools in China were recruited in this study. Of these participants, 65 (30.95%) were aged 41 to 50, 54 (25.71%) were aged 31 to 40, 62 respondents (29.52%) were aged 18 to 30 and 29 (13.81%) were aged 50 and above. There were 146 junior high school teachers (69.52%), 45 (21.43%) senior high school teachers, and 19 (9.05%) primary school teachers. Of the respondents, 136 (64.76%) had a bachelor's degree, 71 (33.81%) held a master's degree and 3 (1.43%) held a doctoral degree. The participants spend an average of 10.63 hours per week on teaching English ( $SD = 3.8$ ). Their English teaching experience ranged from 0.5 to 40 years, with a mean of 15.44 years ( $SD = 10.4$ ). When asked to self-rate their English proficiency level on a scale of 1 (very poor) to 10 (native-like), the participants reported an average score of 6.24 ( $SD = 1.7$ ). Of the participants, 133 of them (63.33%) rated their proficiency at a score of 5 or above.

### **Instruments**

The questionnaire used in this study included four parts: the background questionnaire, the 13-item TFLAS, the 21-item TAS, and the 16-item Teacher Self-efficacy Scale (TSES).

#### *The Background Information Questionnaire*

The background information questionnaire was intended to collect the respondents' personal information, including age, education level, length of teaching experience, self-rated English proficiency, and so on.

#### **TFLAS**

The 13-item TFLAS was modified from the TFLAS developed by Horwitz (2008). All items were on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). An example item is "I am not nervous speaking English with students." As Horwitz (2008) suggested, the participants' level of FLA is calculated by summing up their responses to all items and dividing it by the total number of items: an average score of around 3 implies mild anxiety while a score of around 4 suggests a certain degree of anxiety about language competence (Liu & Wu, 2021). The scale showed that reliability in this research was high ( $\alpha = .88$ ).

## TAS

The 21-item TAS designed by Parsons (1973) was adopted in this study. The researchers made several changes in the expressions for better clarity. For example, expressions like “pre-service” were removed. An example item is “I feel uncertain about my ability to improvise in the classroom.” All items were assessed using a 5-point scale from 1 (never) to 5 (always). The scale had high reliability in the present study ( $\alpha = .91$ ).

## TSES

The 16-item TSES utilized in the study was developed by Bandura (1997). The researchers modified some items to suit the research context, for example, removing statements about efficacy to influence school resources and decision-making. An example item is “I have the ability to get through to the most difficult students.” The scale was a 7-point Likert scale with values of 1 (Strongly Disagree) to 7 (Strongly Agree). The scale had high reliability in the present study ( $\alpha = .93$ ).

## Data Collection and Analysis

The questionnaire was first translated from English into Chinese and double-checked. Then, it was distributed to all potential respondents with a consent form online. Participation was voluntary. The collected data was analyzed through SPSS 27.0 and Mplus 8.0. Firstly, the missing and abnormal data were removed. Then, the EFA was conducted to examine the underlying factors of the three constructs. After that, descriptive statistics were performed to investigate participants’ levels of FLA, TA and TSE. Zero-order correlation analyses and structural equation modeling (SEM) analysis were performed to investigate the relationships among the three constructs and the mediating effects of teaching anxiety.

## RESULTS

### EFA of the Scales

Prior to further statistical analysis, EFA was done on all the scales to explore their underlying dimensions. When running EFA, the Kaiser-Meyer-Olkin (KMO) value and Bartlett’s test of sphericity are measures of whether the data is suitable for factor analysis. Ranging from 0 to 1, a KMO value above 0.7 is considered acceptable (Kaiser & Rice, 1974). As for Bartlett’s test of sphericity, if  $p < .05$ , it indicates that the variables in the original data are correlated, and factor analysis is appropriate (Bartlett, 1937).

The pre-analysis of Bartlett’s test ( $\chi^2 = 1413.203, p < .001$ ) and KMO value (KMO = .856) indicated the appropriateness of EFA on TFLAS (Teacher Foreign Language Anxiety Scale) (Hair et al., 2019), which categorized the TFLAS items into three major factors that accounted for 66.70% of the variance (see Table 1), namely foreign language teachers’ anxiety about negative outcomes (TFLAS1, 6 items), confidence in English competence (TFLAS2, 5 items), and oral communication (TFLAS3, 2 items).

The EFA recognized five factors in TAS (Bartlett’s test  $\chi^2 = 2263.470, p < .001$ , KMO = .894) that could explain 66.16% of the variance. These included teachers’ anxiety related to teaching confidence (TAS1, 7 items), classroom and communication (TAS2, 5 items), sense of teacher identity (TAS3, 3 items), performance in front of colleagues (TAS4, 3 items), and students’ questioning (TAS5, 3 items) (see Table 2), with all the items featuring significant factor loadings ranging from .451-.825 ( $p < .001$ ).

EFA revealed four factors in TSES (Bartlett’s test  $\chi^2 = 1965.192, p < .001$ , KMO = .910), four factors were identified (See Table 3), explaining 73.03% of the variance in total. They were named as classroom climate efficacy (TSES1, 5 items), classroom control efficacy (TSES2, 4 items), instructional efficacy (TSES3, 3 items), and English teaching efficacy (TSES4, 3

Table 1. EFA Results of TFLAS

Items	Factors		
	TFLAS1	TFLAS2	TFLAS3
It frightens me when I don't understand what someone is saying in English.	.762		
I am afraid that others will notice every mistake I make.	.778		
I feel self-conscious speaking English in front of teachers of English.	.782		
When speaking English, I can get so nervous I forget things I know.	.809		
I get nervous when I don't understand every word others say.	.824		
I always feel that other teachers speak English better than I do.	.718		
I would not worry about teaching a course entirely in English.		.697	
I am pleased with the level of my English language proficiency I have achieved.		.860	
I speak English well enough to be a good English teacher.		.795	
I feel confident when I speak English.		.713	
I feel that my English preparation was adequate for becoming an English teacher.		.735	
I am not nervous speaking English with students.			.880
I don't worry about making mistakes in English.			.704

items). The standardized factor loadings of all items ranged from .570-.896 with high statistical significance ( $p < .001$ ).

### Levels of TFLA, TA and TSE

As Table 4 presents, participants generally felt not so anxious about speaking a foreign language ( $M = 3.1$ ,  $SD = .89$ ). They scored higher on TFLAS1 (fear of negative outcomes in foreign language use) ( $M = 3.6$ ,  $SD = 1.2$ ) than on TFLAS2 (anxiety about confidence in English competence) ( $M = 2.7$ ,  $SD = 1.0$ ) and TFLAS3 (anxiety about oral communication) ( $M = 2.6$ ,  $SD = 1.1$ ). Meanwhile, the overall TAS score was below average on a five-point scale, indicating the limited anxiety level of the participants ( $M = 2.1$ ,  $SD = .5$ ). The respondents scored lower in the levels of anxiety about teaching confidence (TAS1) ( $M = 1.9$ ,  $SD = .5$ ) and about students' questioning (TAS5) ( $M = 2.1$ ,  $SD = 0.7$ ).

In addition, primary and secondary school EFL teachers in the present study reported a high level of teaching efficacy, both from an overall perspective ( $M = 5.8$ ,  $SD = .6$ ) and in the four TSES dimensions. Specifically, the efficacy beliefs related to classroom control ( $M = 5.9$ ,  $SD = .7$ ) and classroom climate ( $M = 5.9$ ,  $SD = .6$ ) were relatively higher than instructional efficacy ( $M = 5.5$ ,  $SD = .8$ ).

### Relationships Among TFLA, TA and TSE

Zero-order correlation analyses were initially carried out to examine the correlations between TFLAS, TAS and TSES. As Table 5 shows, all components of the three constructs were generally significantly correlated. TFLAS scales significantly correlated with TAS scales ( $r = .21 \sim .57$ ,  $p < .01$ ). The TSES components were significantly negatively associated with all TFLAS scales ( $r = -.71 \sim -.14$ ,  $p < .05$ ) except for TFLAS1 ( $r = .11$ ) and TAS scales ( $r = -.59 \sim -.17$ ,  $p < .05$ ). These findings suggested that participants with higher TFLAS scores were more anxious about teaching and had a lower level of teacher self-efficacy.

Table 2. EFA Results of TAS

Items	Factors				
	TAS1	TAS2	TAS3	TAS4	TAS5
I am confident in teaching.	.523				
I feel certain about my ability to keep the students interested in what I teach them.	.626				
I feel well prepared for teaching.	.683				
I am able to decide how to present information in the classroom without a feeling of uncertainty.	.668				
I feel sure I can be a good teacher.	.764				
Good rapport with my students is one of my strong points.	.695				
I feel sure that my students are satisfied with my teaching.	.773				
I feel uncertain about my ability to improvise in the classroom.		.661			
I feel anxious when I am preparing lessons.		.798			
I'm afraid students won't follow my instructions.		.747			
I'm afraid other teachers think I'm incompetent.		.758			
I feel anxious about my ability to keep a class under control.		.743			
I'm happier teaching than I thought I'd be.			.741		
I feel certain I really want to be a teacher.			.748		
I'm worried whether I will find teaching a satisfying profession.			.674		
I am afraid to speak up in staff meetings.				.516	
I feel that I am as good as other teachers in my program.				.606	
I feel at ease when I am being observed by my colleague.				.754	
I find it difficult to admit to the class that I don't know the answer to a question a student asks.					.687
I'm afraid I will forget everything I know when I get in front of a class.					.519
I feel calm and collected when a student asks me a question I can't answer.					.639

The correlation results promised the feasibility of Structural Equation Modeling (SEM), which was then performed to further explore the relationships among the three variables. We hypothesized that TA mediated the effect of TFLA on TSE. A simple mediation model was first established as shown in Figure 1. It featured an unsatisfactory model fit ( $\chi^2/df = 2.504, p < .001, CFI = .880, SRMR = .072, RSMEA = .085, 90\% CI [.076, .094]$ ) despite all the path coefficients being highly significant. To effectively model the relationships among the three variables, the researchers used the four TSES dimensions and constructed a more complex mediation model in Figure 2. The model fit this time became acceptable ( $\chi^2/df = 2.277, p < .001, CFI = .902, SRMR = .067, RSMEA = .078, 90\% CI [.069, .087]$ ).

As shown in Figure 2, the TSES subscales were negatively predicted by TFLAS ( $\beta = -.249, p < .05; \beta = -.284, p < .001; \beta = -.646, p < .001$ ) and TAS ( $\beta = -.420, p < .001; \beta = -.379, p < .001; \beta = -.471, p < .001; \beta = -.287, p < .01$ ). Moreover, TAS was positively predicted by TFLAS ( $\beta = .590, p < .001$ ).



Table 3. EFA Results of TSES

Items	Factors			
	TSES1	TSES2	TSES3	TSES4
I have the ability to make the classroom a safe place.	.631			
I have the ability to make students enjoy coming to the class.	.633			
I have the ability to get students to trust me.	.726			
I have the ability to get students to believe in their ability to learn English well.	.623			
I have the ability to get students to support one another.	.634			
I have the ability to get students to engage in classroom activities.		.546		
I have the ability to get students to do their coursework.		.667		
I have the ability to get students to follow classroom rules.		.863		
I have the ability to control disruptive behavior in the classroom?		.808		
I have the ability to increase students' memory of what they have been taught in previous lessons.			.463	
I have the ability to motivate students who show low interest in English learning.			.855	
I have the ability to get students to work well together.			.681	
I believe I am competent in English.				.838
I believe I am able to teach English courses well.				.804
I believe I am knowledgeable about course subjects.				.745

Table 4. Descriptive Statistics of TSES, TFLAS and TAS Results

Scales	M	SD	Cronbach's $\alpha$	No. of items
TFLAS	3.1	0.9	.88	13
- TFLAS1	3.6	1.2	.89	6
- TFLAS2	2.6	1.0	.86	5
- TFLAS3	2.6	1.1	.64	2
TAS	2.1	0.5	.91	21
- TAS1	1.9	0.5	.89	7
- TAS2	2.2	0.7	.87	5
- TAS3	2.3	0.7	.69	3
- TAS4	2.5	0.7	.61	3
- TAS 5	2.1	0.7	.64	3
TSES	5.8	0.6	.93	3
- TSES1	5.9	0.6	.86	15
- TSES2	5.9	0.7	.86	4
- TSES3	5.5	0.8	.76	3
- TSES4	5.8	0.8	.87	3

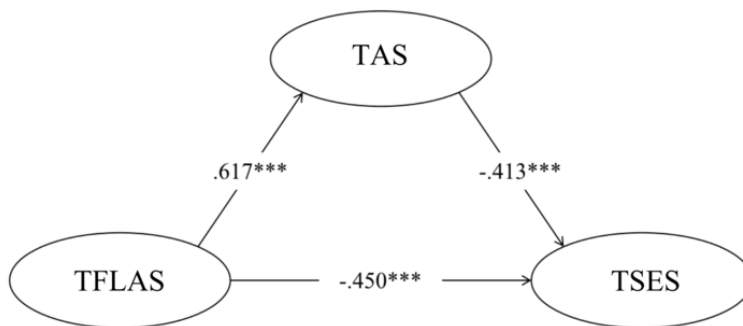
Note: M = Mean; SD = Standard Deviation

Table 5. Zero-Order Correlation Analyses Results

	1TFLAS	2TFLAS1	3TFLAS2	4TFLAS3	5TAS	6TAS1	7TAS2	8TAS3	9TAS4	10TAS5	11TSES	12TSES1	13TSES2	14TSES3	15TSES4
1	1														
2	.86**	1													
3	.80**	.41**	1												
4	.58**	.24**	.54**	1											
5	.57**	.50**	.44**	.34**	1										
6	.48**	.33**	.46**	.33**	.86**	1									
7	.48**	.50**	.28**	.22**	.82**	.56**	1								
8	.26**	.18**	.24**	.21**	.63**	.51**	.29**	1							
9	.49**	.40**	.41**	.31**	.73**	.56**	.50**	.41**	1						
10	.46**	.48**	.28**	.22**	.72**	.52**	.60**	.28**	.39**	1					
11	-.45**	-.21**	-.55**	-.40**	-.55**	-.59**	-.41**	-.28**	-.43**	-.30**	1				
12	-.35**	-.16*	-.44**	-.33**	-.47**	-.53**	-.32**	-.30**	-.33**	-.24**	.89**	1			
13	-.32**	-.14*	-.40**	-.30**	-.45**	-.46**	-.36**	-.17*	-.38**	-.26**	.84**	.67**	1		
14	-.27**	-.11	-.35**	-.29**	-.41**	-.45**	-.33**	-.20**	-.31**	-.20**	.82**	.64**	.58**	1	
15	-.59**	-.31***	-.71**	-.45**	-.53**	-.57**	-.38**	-.26**	-.44**	-.31**	.83**	.64**	.59**	.61**	1

Note: \* =  $p < .05$ ; \*\* =  $p < .01$ ; \*\*\* =  $p < .001$ .

Figure 1. A Simple Mediation Model of TFLAS, TAS and TSES



In addition, the 2000 times bootstrapping results indicated the significant mediating effects of TAS between TFLAS and all four TSES dimensions (see Table 6). For teachers' efficacy in creating positive classroom climate (TSES1) and classroom control (TSES2), the indirect effects of TFLAS through TAS ( $\beta = -.249, p < .05$ ;  $\beta = -.224, p < .01$ ) both accounted for nearly half of the total effects (49.9% and 44.0%, respectively). Instructional efficacy (TSES3) received the lowest total effect of TFLAS and was only significantly predicted through teaching anxiety's mediation ( $\beta = -.278, p < .05$ ). Comparatively, TFLAS exerted its highest total effect on teachers' self-efficacy in English teaching (TSES4), with its dominating direct effect ( $\beta = -.646, p < .001$ ) while indirect effect through TAS ( $\beta = -.169, p < .05$ ) taking up 20.7% of the total effect.

Figure 2. A Mediation Model of TFLAS, TAS and Various Dimensions of TSES

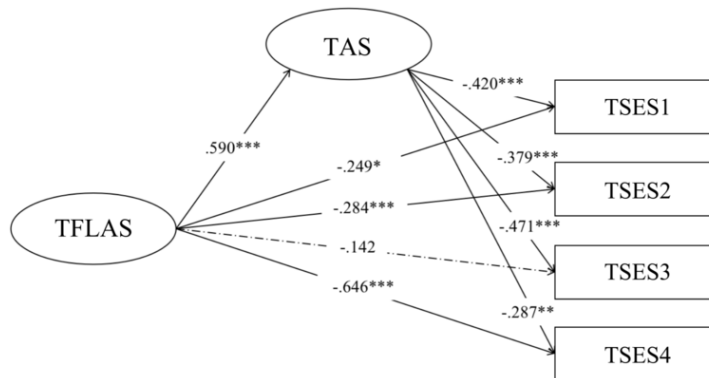


Table 6. Different Paths of Variables in the Structural Model

Path	Parametric estimation		95% Bootstrap		Percentage
	$\beta$	SE	LLCI	ULCI	
Direct effect					
TFLAS→TSES1	-.249*	.114	-.484	-.026	50.1%
TFLAS→TSES2	-.284***	.080	-.445	-.133	56.0%
TFLAS→TSES3	-.142	.116	-.378	.082	/
TFLAS→TSES4	-.646***	.089	-.837	-.478	79.3%
Indirect effect					
TFLAS→TAS→TSES1	-.249*	.090	-.290	-.102	49.9%
TFLAS→TAS→TSES2	-.224**	.091	-.233	-.131	44.0%
TFLAS→TAS→TSES3	-.278*	.103	-.301	-.173	66.1%
TFLAS→TAS→TSES4	-.169*	.101	-.206	-.048	20.7%

Note: SE = standard error; LLCI = lower-level confidence interval; ULCI = upper-level confidence interval

## DISCUSSION

### Levels of TFLA, TA, and TSE

The respondents reported low to moderate degrees of TFLA and TA, which aligned with the findings in Liu and Wu (2021). There were two possible reasons for this finding. Firstly, through ample practice and preparation, teachers could have honed their pedagogical skills and mastered the subject knowledge (Alrashidi, 2022; Ikeda et al., 2020). This might potentially explain the lower levels of anxiety of participants. Becoming an English teacher in China requires intensive training and multiple assessments during the selection process. After being employed, teachers are also required to regularly participate in professional development training programs. In addition, compared to university teachers, Chinese primary and secondary school teachers usually do not have the excessive pressure to conduct academic research (Liu & Yi, 2020), which may decrease some of their stress and anxiety. Moreover, pre-university English teachers typically deliver instruction on fundamental English concepts using standardized textbooks and curriculum guidelines. The carefully designed

and structured materials provide a clear and organized framework for teachers, which may alleviate their apprehension in teaching.

The study also revealed that the participants had a high level of self-efficacy, indicating their strong beliefs in their abilities to effectively teach English. According to Bandura (1997), vicarious experience and verbal persuasion are major sources of self-efficacy beliefs. Vicarious experience involves observing others completing the same tasks and conducting self-assessments based on the observation, while verbal persuasion refers to receiving appraisals and feedback from others. In the Chinese contexts, primary and secondary school teachers are frequently required to deliver lessons in front of superiors and colleagues and listen to their feedback. Meanwhile, they need to observe their colleagues' classes and give critiques. Additionally, they have opportunities to learn from experienced teachers and exchange teaching experiences with colleagues during the teacher training workshops and seminars. Overall, these teaching experiences are likely to contribute to participants' confidence in teaching and the high level of TSE. Nevertheless, other research on Chinese EFL teachers found moderate to high levels of teacher self-efficacy (Liu et al., 2021; Shao, 2017). This inconsistency might be due to the differences in research settings and populations. For example, Liu and his colleagues (2021) specifically focused on Chinese high school English teachers' self-efficacy in livestream teaching during the spread of COVID-19. The lack of training in online teaching during that period may increase the respondents' pressure and potentially reduce their self-efficacy. Given the inconsistent findings, further research is necessary to investigate Chinese pre-university EFL teachers' self-efficacy.

### Relationships Among TFLA, TA and TSE

Zero-correlation analyses showed that TFLAS and TSES were negatively correlated. SEM results revealed that participants' FLA negatively predicted their TSE beliefs. Alternatively, the higher levels of TFLA led to the low level of teacher self-efficacy. This finding was consistent with previous relevant research on language learners (e.g., B ark anyi, 2021; Lin, 2022; Zhou et al., 2022). For example, Zhou and her colleagues meta-analyzed the relation between FLA and efficacy and reported a moderate negative link between them ( $r = -.70$ ). This negative relation remains consistent across different contexts. In Lin's (2022) study of Chinese L3 learners, participants' anxiety was a negative predictor of self-efficacy.

Language learning is an ongoing process which is never truly complete (Horwitz, 1996). Foreign language anxiety is a common emotion experienced by language learners, characterized by feelings of worry and insecurity during the learning process (Horwitz et al., 1986). Similar to inexperienced language learners, non-native language teachers may feel unease and discomfort when using it in class (e.g., Goetze, 2023). Those who experienced high FLA would worry about negative outcomes and lack confidence in their English competence (Chen et al., 2023; Fraschini & Park, 2021). Bandura (1977) suggested that emotional states can significantly contribute to one's self-efficacy beliefs.

In terms of the relationship between TFLAS and TAS, zero-correlation analyses revealed positive correlations between the two, consistent with the findings in Liu and Wu (2021). SEM results showed that respondents' FLA positively predicted TA. Teaching anxiety is about the tension, anxiety, and pressure experienced by teachers in teaching (Gardner & Leak, 1994). Teachers with high FLA may consciously or unconsciously choose "instructional strategies that shield themselves from having to use the language publicly and actively" and prefer interactions with students that are more "predictable and more easily controlled" (Horwitz, 1996, p. 366). Such avoidance behaviors can convey negative messages to students about language learning and increase the difficulty of teaching.

The study also found that TAS mediated the relationship between TFLAS and TSES. Participants who were anxious about their language abilities may encounter more challenges and experience more teaching anxiety, which can in turn affect their self-efficacy beliefs. This finding partly supported previous education researchers' findings (Bach & Hagenauer, 2022; Senler, 2016; Unlu et al., 2017). Mer  (2015) focused on Turkish pre-service EFL teachers and participants' teaching anxiety negatively

correlated with self-efficacy beliefs. In the Unlu et al. (2017) study of pre-service mathematics teachers, mathematics anxiety positively predicted mathematics teaching anxiety and negatively predicted self-efficacy toward mathematics teaching. There is currently limited research on the predictive effects of the two types of anxiety on self-efficacy, and further empirical investigation is needed.

Dewaele (2020) suggested that language teaching can be “an emotion-laden process” (p. 214). Teachers may be bothered by negative emotions because of insufficient language proficiency and “the resulting stress and unhappiness can create a negative spiral” (p. 214). A possible explanation for this finding is as follows. The Chinese government’s emphasis on developing students’ oral communication skills (Ministry of Education of China, 2022) can raise concerns among teachers regarding their language proficiency, specifically oral English skills. This, in turn, may trigger teachers’ teaching anxiety when using the foreign language to conduct language-intensive instructional activities. The negative predictive effects of FLA on TA were discussed earlier. As for the influence of teachers’ anxiety, general education research has shown that anxious teachers are less likely to be perceived as approachable and passionate about teaching (Kracht & Casey, 1968). They may appear easily provoked, impatient, and emotionally unstable in teaching (Sinclair & Ryan, 1987). Also, they may avoid interaction with students (Erdle et al., 1985). After students have sensed their teacher’s anxiety, it would become more challenging to cultivate a positive classroom atmosphere and foster active teacher-student relationships (e.g., Blazar & Kraft, 2017). Horwitz (1996) explains, “If the teacher does not appear comfortable speaking the foreign language, how can students be expected to believe that they will be able to speak the language?” (p. 366). Poor student engagement can lead to poor learning outcomes (Mercer & Dörnyei, 2020). Consequently, it can be inferred that previous failures in teaching experience may decrease their self-efficacy (Bandura, 1997).

## CONCLUSION

The present research focused on Chinese in-service pre-university language teachers and empirically explored their levels of FLA, TA, and TSE as well as their interrelationships. It was found that: (a) the respondents experienced low to medium levels of TFLA and TA, and a high level of TSE; (b) TFLAS was a direct and negative predictor of the participants’ TSES; (c) TFLAS positively predicted TAS; (d) TAS mediated the link between TFLAS and TSES.

These findings could provide valuable insights for language teachers and school administrators. School administrators should take proactive measures to support and empower teachers in their professional growth. For example, schools should implement regular assessments of teachers’ teaching performance, and offer fair recognition and rewards. Moreover, schools can provide financial support for teachers to participate in professional development training programs. School leaders could consider assigning senior teachers as mentors to new teachers on a one-on-one basis to help them. Furthermore, school administrators should prioritize teachers’ mental health and provide more support and resources. Additionally, they should aim to foster a positive working environment where teachers can freely express their concerns and feel valued (Fraschini & Park, 2021, 2022). It is recommended that for teachers who are not responsible for administrative work, their non-teaching related tasks should be minimized. School administrators should reasonably allocate teachers’ workload in order to alleviate their anxiety and burden. For FL teachers, they should recognize the significant influence of anxiety and try to develop emotional self-regulation strategies (Dewaele, 2020). They can increase their language proficiency and teaching competence to boost their confidence in teaching. For example, they can intentionally join various teaching workshops and academic conferences. These platforms allow them to share experiences with colleagues and obtain knowledge of the latest teaching methodologies.

The present study was one of the few that examined the levels of and relationships among pre-university teachers’ foreign language anxiety, teaching anxiety, and teacher self-efficacy. The results not only enrich the current literature but also enlighten teachers’ foreign language teaching. Meanwhile, the study had several limitations and suggestions for future research. Firstly, it was cross-sectional and

solely employed self-reported survey data. Future researchers could benefit from using qualitative or mixed methods. They may consider collecting other types of data, such as classroom recordings, teaching performance metrics, student evaluations of teachers, and so on, which will help us better understand teachers' foreign language anxiety, teaching anxiety, and self-efficacy and think more on how to improve the effectiveness of foreign language teaching. They could also conduct longitudinal studies to explore the changes in teachers' anxiety and self-efficacy, as well as identify possible influencing factors. In addition, this study did not examine participants' anxiety and self-efficacy in relation to individual factors due to the limited sample size. Future researchers could recruit a large number of participants and explore how individual characteristics influence language teachers' anxiety and self-efficacy as well as their relationships. It is recommended to focus on anxiety and self-efficacy of specific groups of teachers, such as beginner teachers, and investigate the factors that lead to their increased levels of anxiety.

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The authors of this publication declare there are no competing interests.

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