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### Foreign language classroom anxiety

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## Chapter 4

### **Situational and psychological correlates of foreign language anxiety: The case of Chinese university learners of Japanese and English<sup>1</sup>**

This chapter reports a study comparing the impact of two classroom environment dimensions (teacher support and student involvement) and two personality attributes (trait anxiety and competitiveness) on foreign language (FL) anxiety. It also compares the weighted contributions of the two situational dimensions of teacher support and student involvement with those of the two psychological factors of trait anxiety and competitiveness to FL anxiety. Chinese university freshmen of Japanese ( $N=146$ ), who were simultaneously learning English, participated in this study. Data were collected twice with a two-month interval, using the Foreign Language Classroom Anxiety Scale (Horwitz, Horwitz, & Cope, 1986), the Teacher Support Scale (Trickett & Moos, 2002), the Involvement Scale (Trickett & Moos, 2002), the Competitiveness Index (Houston, Harris, McIntire, & Francis, 2002), and the Trait Anxiety Scale (Spielberger, 1983). Results showed that: a) both teacher support and student involvement significantly predicted FL anxiety, with teacher support being the better predictor; b) both trait anxiety and competitiveness significantly predicted FL anxiety, with trait anxiety being the better predictor; and c) the two personality traits of trait anxiety and competitiveness predicted FL anxiety better than the two classroom dimensions of teacher support and student involvement, suggesting that FL anxiety is influenced more by personality factors than classroom variables.

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#### **4.1. Introduction**

In research on second language learning, foreign language (FL) anxiety has received considerable attention as an affective characteristic that may influence the learning process. Among many issues pertaining to FL anxiety, the identification of its sources has been a key issue in the field of FL learning (Ellis, 2008). Yet despite numerous studies, some issues have still hardly been addressed to date. For instance, some personality traits and classroom climate dimensions have seldom been examined with respect to FL anxiety. Moreover, the effects of personality traits and classroom environment dimensions on FL anxiety have not -to our knowledge- been directly compared. Methodologically, previous studies have typically adopted a cross-sectional design. Greatly lacking are studies that look at anxiety-provoking factors over time. In addition, few researchers have examined learning several FLs by the same participants. Moreover, Chinese FL learners have not been targeted in such studies.

This study investigates 146 Chinese undergraduates. We probed the effects of two classroom environment dimensions (teacher support and student involvement) and two personality attributes (trait anxiety and competitiveness) on learners' FL anxiety levels within Japanese and English learning contexts and at two moments in time. The main aim underlying this study was to find out what the more important classroom variable and personality trait associated with FL anxiety are, and to tentatively answer whether FL anxiety is more sensitive to classroom environment factors or personality attributes.

#### **4.2. Theoretical Background**

Horwitz, Horwitz, and Cope (1986) observed 'freezing' in class and an unwillingness to enter the FL classroom in students enrolled in a "Support Group for Foreign Language Learning" at the University of Texas. Learners like these very probably are experiencing a special type of

anxiety, i.e., FL anxiety, which is 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” (Horwitz et al., 1986, p. 128). As it stands, FL anxiety has now developed as one of the most examined affective qualities in FL learners (Ellis, 2008).

Past research into FL anxiety spans a diversity of topics. Horwitz (2010) listed 44 studies that were considered milestones in the FL anxiety field and concluded that early studies explored the nature of FL anxiety and its effects on language achievement, with later studies addressing topics such as the sources and stability of FL anxiety. Across all studies, the identification of FL anxiety sources has been regarded as a key issue (Ellis, 2008). After reviewing the FL anxiety literature, Young (1991) identified six potential sources of language anxiety: (1) personal and interpersonal anxieties, (2) learner beliefs about language learning, (3) instructor beliefs about language teaching, (4) instructor-learner interactions, (5) classroom procedures, and (6) language testing. In what follows, we only focus on those studies investigating personality attributes or classroom environment in relation to learners’ anxiety levels.

#### **4.2.1. Classroom Environment and FL Anxiety**

Classroom environment is undoubtedly a crucial factor for successful FL learning. Ely (1986) stressed the necessity to make students feel “psychologically comfortable and safe in their learning environment” (p. 23). Recently, Dewaele (2011) noted that “[the] progress of an L2 learner can be linked to the chemistry that develops between the learner, the group of learners, and their teacher.” (p. 28). The importance of classroom environment can also be seen from the theoretical speculation particularly addressing the relationship between language achievement and group cohesiveness in the classroom, the latter of which belongs to a more general concept of group cohesion defined as “the integrity, solidity, social integration, unity,

and groupiness of a group” (Forsyth, 2014, p. 10). For example, Dörnyei (1997) claims that student cohesiveness underlies the development of learners’ communicative skills, by increasing peer interaction. It should be noted that classroom dimensions may not necessarily directly impact on FL learning outcomes, but indirectly through influencing learners’ affects known as “those emotionally relevant characteristics of the individual that influence how she/he will respond to any situation” (Gardner & MacIntyre, 1993, p. 1). One such affective variable is FL anxiety.

Cohen and Norst’s (1989) diary study of nine students who learned a FL (unspecified by the authors) to fulfill the requirements for a Master’s degree disclosed teacher support and competition as determinants of anxiety levels. A student who was taught by an unsympathetic teacher stated: “Kept trying to think up excuses all day for not going to class and by 5 p.m. had a terrible headache...All I’ve experienced...is what it’s like to be a victim in a language class” (p. 69). As for competition, one girl expressed: “I blushed with embarrassment every time I was asked a question and I couldn’t answer one question. X got everything right and understood everything...” (p. 68). Noteworthy is that several places in the diaries pointed to teachers’ influences on learners’ anxious reactions in the classroom, which led Cohen and Norst (1989) to observe that “a critical factor, if not *the* factor, [to reduce learners’ fear or anxiety], is the warmth, friendliness, empathy and personal commitment of the teacher to the students as people rather than as pupils” (p. 75). Young (1990) aimed to find out which instructor characteristics tended to reduce learners’ anxiety in speaking Spanish as a FL in class. The three characteristics most cited by the 135 university student participants and 109 high school pupils were: friendly, good sense of humor, and patient.

The effects of different dimensions of classroom climate on FL anxiety have also been probed in quantitative studies. Palacios (1998) administered the Foreign Language Classroom Anxiety Scale (FLCAS) (Horwitz et al., 1986) and the Classroom Environment Scale (CES)

(Trickett & Moos, 1973) to 227 Spanish I and 218 Spanish IV university students. Simple correlation analyses revealed a significant association between FL anxiety and classroom environment dimensions at Spanish I level: a negative link with student-to-student connection, student involvement, and teacher support, but a positive correlation with competition and task orientation. At Spanish IV level, the same patterns were found except that student-to-student connection and competition were not significantly related to FL anxiety anymore. Subsequent regression analyses for Spanish I and IV revealed a relationship between anxiety and some aspects of classroom climate, but the details of these aspects are left unspecified.

Abu-Rabia (2004) investigated teachers' roles in FL anxiety on the basis of 67 Grade 7 pupils aged 12-13, who were studying English as a FL at two Israeli secondary schools, using the FLCAS and a 10-item Likert scale assessing teachers' attitudes towards learners. The regression analysis used in Abu-Rabia (2004) showed that perceived teacher support was a negative predictor of FL anxiety. Huang, Eslami, and Hu (2010) furthermore found that teacher academic/personal support was significantly negatively related to the FLCAS factor of fear of failing the class, but was positively related to a factor labeled "comfort with English learning", which was also positively associated with academic/personal support provided by peers.

#### **4.2.2. Personality and FL Anxiety**

Personality refers to a person's traits that "account for consistent patterns of response to situations" (Pervin, 1980, p. 6). FL anxiety is related to personality attributes (Dewaele, 2013). Alternatively, people with a certain personality are prone to be anxious in FL learning and/or their use of the language. One attribute that is often cited in this context is low self-esteem (e.g., MacIntyre, 1999; Young 1991). Quantitative studies have consistently found a negative correlation between FL anxiety and self-esteem. For instance, Liu and Zhang's study

(2008), in which they looked at 934 first-year non-English majors at three Chinese universities, found that self-esteem measured by the Self-esteem Scale (Rosenberg, 1965) was significantly negatively correlated with scores on the full adapted FLCAS as well as with three underlying factors, i.e., fear of negative evaluation, communication apprehension, and test anxiety. Other studies corroborating this finding include Onwuegbuzie, Bailey, and Daley (1999), and Zare and Riasati (2012).

Researchers have related FL anxiety to trait anxiety and a significant relationship has been found between these two variables: .29 in Horwitz (1986) and .34 in Chiang (2010). In addition, three personality dimensions evaluated by the Eysenck Personality Questionnaire (Eysenck, Eysenck, & Barrett, 1985), i.e., extraversion, neuroticism, and psychoticism were also examined with respect to FL anxiety. In Dewaele (2013), participants were taken from two groups of university student populations (86 from London and 62 from Mallorca). The FLs learnt by these students were labeled L2, L3, or L4. It was found that neuroticism was significantly and positively related to anxiety in the L2 and L3 for the London group, but to anxiety in the L2 to L4 for the Mallorca group. However, psychoticism and extraversion were only negatively related to anxiety in the L3 for the Mallorca group. Dewaele's (2013) study replicated Liu and Zhang's (2008) findings that neuroticism and extraversion were positively and negatively associated with FL anxiety, respectively. The difference between the two studies lies in the psychoticism-anxiety relationship, which was negative in Dewaele (2013), but positive in Liu and Zhang (2008). It should be noted that psychoticism is not the only personality trait into which research vis-à-vis FL anxiety yielded conflicting results. Another such trait is competitiveness: Onwuegbuzie et al. (1999) reported a non-significant relationship between competitiveness and FL anxiety; Tóth (2007) found a significant positive relationship; In Jin, De Bot, and Keijzer (2015b, cf. Chapter 2), a significant negative relationship was attested. These conflicting results may arise from the discrepancies across

studies in sample size, the degree of heterogeneity of samples, or instruments, or even the involvement of a third factor, for instance cultural background (Jin et al., 2015b, cf. Chapter 2).

Furthermore, Gregersen and Horwitz (2002) investigated the relationship between FL anxiety and perfectionism in a sample of eight students of English. Four were highly anxious (scoring 92 to 101 out of 165 on the FLCAS) and the other four showed very low anxiety levels (scoring 34 to 41 on the FLCAS). All participants were video recorded when engaging in a 5-minute one-on-one conversation with the first author of the study on five simple topics, for instance *How do you celebrate Independence Day/normally spend your weekends?* The students then reviewed and commented on their videos. Comments pointing to high personal performance standards, fear of evaluation, and error-consciousness were treated as indexes of perfectionism. It was found that anxious students demonstrated more of these perfectionist tendencies than the relaxed ones, suggesting that perfectionism is a potential reason for FL anxiety.

To sum up, a review of past work on classroom environment and personality dimensions in relation to FL anxiety revealed the necessity to continue studies on anxiety sources, as many issues in this area have been left untouched. For one, the effects of some personality traits on FL anxiety have seldom been investigated and compared in previous studies. This also holds for classroom environment dimensions. Dewaele (2007b) contended that FL anxiety is probably “more sensitive to environmental factors than personality traits” (p. 405). However, such an assumption has not been examined in studies comparing the weighted contributions between classroom variables and personality attributes to FL anxiety.

This study aims to further explore the effects of two classroom variables (teacher support and student involvement) and two psychological learner traits (trait anxiety and competitiveness) on FL anxiety. Trickett and Moos (2002) conceive of teacher support as the



help, friendship, trust, or interest the teachers show toward students, and student involvement as the extent to which students actively engage in classwork, for instance by participating in activities and voluntarily doing extra work in the classroom. The former classroom factor represents the influences of an external agent (i.e., teacher), while the latter represents the internal locus of control (Chen, 2005). Thus a study including the two situational variables has the potential of shedding light on the different roles internal and external learner variables within the classroom setting play vis-à-vis FL anxiety. Trait anxiety defined as "a more permanent predisposition to be anxious" (Scovel, 1978, p. 137) has shown a robust relationship with FL anxiety (Dewaele, 2013; Chiang, 2010; Horwitz, 1986), suggesting trait anxiety may be an important FL anxiety provoking factor. Nevertheless, trait anxiety has seldom been related to other personality traits in terms of the influence on FL anxiety. In this study, we compared the effect of trait anxiety on FL anxiety with that of competitiveness, the latter of which refers to "the desire to win in interpersonal situations" (Helmreich & Spence, 1978, p. 4, as cited in Harris & Houston, 2010) and has been singled out by Young (1991) as a crucial source of FL anxiety. Dewaele (2013) states that the link between FL anxiety and personality traits has been underresearched. Such a comparison may provide insight into the more important personality contributors to FL anxiety. Specifically, this study focuses on the following questions.

1. Do teacher support and student involvement predict FL anxiety? Which of these two is the better predictor?

2. Do trait anxiety and competitiveness predict FL anxiety? Which is the better predictor, trait anxiety or competitiveness?

3. To what extent is Dewaele's (2007b) assumption that FL anxiety is "more sensitive to environmental factors than personality traits" (p. 405) supported in this study?

### **4.3. Methodology**

#### **4.3.1. Design of the Study**

This study employs two repeated surveys conducted over an interval of two months. It targets Chinese university students of Japanese and English. We examined the effects of teacher support, student involvement, trait anxiety, and competitiveness on learners' anxiety levels in English and Japanese learning contexts, at two moments in time. The participants, instruments, and data collection procedures are described below.

#### **4.3.2. Participants**

The participants were 146 first-year Chinese students of Japanese recruited from six Japanese classes at three universities in China (one in Shandong Province and two in Henan Province). The students attending each school were taking a compulsory College English course as a group, taught by only one teacher, but more than one Japanese course. Japanese teachers were not always the same for all classes at each university.

As shown in Table 4.1, the majority of participants were female, resembling the typical gender division of FL programs in China. All participants belonged to the so-called post 90s' cohort, with 85% of students aged 19-21. In addition, these students had learned English for a considerable time before being accepted at university, but they had only started learning Japanese after their university enrollment (with only one exception). Furthermore, 68.5% of the participants came from agricultural areas (villages and townships). Nineteen students (13%) came from small and economically less developed cities. In short, the students recruited for this study were mostly from less developed areas. Overall, their parents had not received much education. Only 11.6% of the fathers and 8.2% of the mothers had attended higher education. Fathers -on average- had a higher educational level. In general, the students came from families of relatively low social status, considering their home location and parents' educational levels.

Table 4.1 A Summary of the Participants' Demographic Information (N=146)

Variables	Subsets	# of Students	%	M (SD)
Gender	Male	21	14.4	
	Female	125	85.6	
Age				19.6 (1.00)
	17-18	18	12.3	
	19-21	124	84.9	
	22-23	4	2.7	
Y.E.L				9.1 (1.88)
	4.5-5.5	3	2.1	
	6.5-9.5	104	71.2	
	10.5-13.5	39	26.7	
Y.J.L				.5 (.29)
	0.5	145	99.3	
	4	1	0.7	
R.L				1.9 (1.21)
	Village	86	58.9	
	Township	14	9.6	
	County	19	13.0	
	Prefecture-City	27	18.5	
F.E				2.4 (.87)
	Primary School	21	14.4	
	Junior School	65	44.5	
	Senior School	43	29.5	
	College	17	11.6	
M.E				2.2 (.91)
	Primary School	36	24.7	
	Junior School	58	39.7	
	Senior School	40	27.4	
	College	12	8.2	

Note. Y.E.L/Y.J.L=Years of English/Japanese Learning (up until Time 1); R.L= Residential Location; F.E= Father's Education; M.E=Mother's Education; Percentages may not add up to 100% due to rounding.

### 4.3.3. Instruments

Apart from the Demographic Information Questionnaire (DIQ) used to collect the participants' background information as shown in Table 4.1, five other questionnaires were administered:

the Competitiveness Index (CI) (Houston, Harris, McIntire, & Francis, 2002), the Trait Anxiety Scale (TAS) (Spielberger, 1983), the Teacher Support Scale (TSS) and the Involvement Scale (IS) (Trickett & Moos, 2002), and the Foreign Language Classroom Anxiety Scale (FLCAS) (Horwitz et al., 1986). All the five questionnaires include both positively and negatively worded items. Negatively worded items “represent low levels or even the absence of the construct of interest”, whereas “the more common positively worded items represent its presence” (DeVellis, 1991, p. 59). In addition, these questionnaires originally developed in English were translated into Chinese so that the participants could clearly understand all items, using the following procedure: either a Chinese-English bilingual with an MA Applied Linguistics degree or the Chinese researcher in this study translated the questionnaires into Chinese (Guo and Wu [2008] was referred to in the process of translating the FLCAS, as well as the online translation, i.e., <http://wenku.baidu.com/view/d0e7b0260722192e4536f6f7.html>; to translate the TAS, the TSS, and the IS, the existing Chinese versions of the three scales, which were offered by Mind Garden, Inc., the copyright holder of these scales, were referred to). The translations were subsequently carefully cross-checked by a senior university student enrolled in a Chinese program, who had a good command of English. The Chinese researcher in this study and the university student resolved the minor discrepancies that occurred between the two of them. The resulting scales were then pretested (see the procedures section) before using them in the investigation.

#### **4.3.3.1. The Competitiveness Index**

The CI has two subscales: the Enjoyment of Competition and the Contentiousness scale and contains 14 Likert-type items in total (1=*strongly disagree*, 2=*disagree*, 3=*neither agree nor disagree*, 4=*agree*, 5=*strongly agree*). The obtainable scores range from 14 to 70. Higher scores indicate stronger competitiveness. Sample items include: *I get satisfaction from*

*competing with others and In general, I will go along with the group rather than create conflict.*

#### **4.3.3.2. The Trait Anxiety Scale**

The TAS is the Trait Anxiety Scale of Spielberger's (1983) State-Trait Anxiety Inventory (Form Y). It comprises 20 items in a 4-point Likert format (1=*almost never*, 2=*sometimes*, 3=*often*, 4=*almost always*). The lower limit for the possible scores is 20 and the upper limit is 80, with higher scores indicating more intense trait anxiety. Two exemplar items are: *I feel that difficulties are piling up so that I cannot overcome them* and *I worry too much over something that really doesn't matter.*

#### **4.3.3.3. The Teacher Support Scale and the Involvement Scale**

The TSS and the IS are two subscales of the Classroom Environment Scale (Trickett & Moos, 2002). They help students describe their learning environment in terms of teacher support and student involvement. Both consist of 10 items in a true-false format. In this study, the original dichotomous format was altered to a 4-point Likert format (1=*strongly disagree*, 2=*disagree*, 3=*agree*, 4=*strongly agree*). Retaining the same "force to choose" property as the original, the two resulting scales were thus more sensitive. As a result, the obtainable scores of the resulting TSS and the IS ranged from 10 to 40, with higher scores representing stronger teacher support and student involvement. Two sample items, respectively taken from the TSS and the IS include: *Sometimes the teacher embarrasses students for not knowing the right answer* and *Most students in this class really pay attention to what the teacher is saying.* Because the TSS and the IS were used to elicit the participants' overall feelings of teacher support and student involvement in English and Japanese classes, *English* or *Japanese classes* were specified whenever necessary. The two scales were respectively relabeled the E-TSS and the E-IS for

English classes, and the J-TSS and the J-IS for Japanese classes.

#### 4.3.3.4. The Foreign Language Classroom Anxiety Scale

The FLCAS consists of 33 items and uses a 5-point Likert format (1=*strongly disagree*, 2=*disagree*, 3=*neither agree nor disagree*, 4=*agree*, 5=*strongly agree*). The lower and upper limit for the obtainable FLCAS scores is 33 and 165, respectively. Higher scores suggest more intense anxiety. In this study, the FLCAS was used to assess anxiety in English and Japanese classes. Hence, *foreign language* in the FLCAS was altered to *Japanese* and *English* and, furthermore, the FLCAS was relabeled the ECAS and the JCAS, representing the English/Japanese Classroom Anxiety Scale. Two exemplar items taken from the two scales are: *It frightens me when I don't understand what the teacher is saying in English* and *I feel more tense and nervous in my Japanese class than in my other classes*.

#### 4.3.4. Procedures

Data collection followed three steps, with Step 1 being a pilot study conducted in two intact Japanese classes with 41 students in total at a university in West China's Shaan'xi Province. The students in this pilot were first-year Japanese majors and were all taking a compulsory English course similar to that of students in the two full surveys. They were tested during their regular class hours. Class 1 was tested first. Based on the results for Class 1, a few Chinese words in the questionnaires -with the exception of the DIQ- were adjusted with the assistance of a Chinese teacher who was teaching English at the pilot study university and the resulting measures were then retested in Class 2. It also needs to be pointed out that no student in Class 2 reported difficulties in understanding the Chinese translations. As the JCAS and the ECAS were identical except for the wording of *English* or *Japanese*, only the JCAS was tested in the pilot study for anxiety scales. Similarly, the TSS and the IS were only tested

for Japanese classes. In short, the results of the pilot study for the JCAS, the CI, the TAS, the J-TSS, and the J-IS were all based on Class 2.

Step 2 of this study's design constituted two full surveys at two time points. The 146 participants were tested in an out-of-class session with no teacher present. At both sessions, all the participants at the same university filled out the full questionnaires in a classroom at the same time. Prior to administering the questionnaires, research purposes were only partly disclosed to students, to avoid a situation where the subjects would respond anticipating the researcher's predisposition. The students were informed that their participation was voluntary and that the survey would not affect their course grades. All participants were expected to give their genuine views independently. After the instructions, the full set of questionnaires was administered. The questionnaires were arranged in the following order: the DIQ, the J-IS, the J-TSS, the CI, the TAS, the JCAS, the E-IS, the E-TSS, and the ECAS. The Time 2 survey -two months later- repeated the procedure of the first round, except that the DIQ was excluded and instructions were short. Questionnaires were checked immediately following completion for unanswered items. When missing answers were identified, those subjects were traced to obtain their answers. Following the two surveys, raw data were registered for further analysis, which formed the Step 3 of the study design. Noteworthy is that all negatively-worded items in the scales were reverse-scored when registering data.

#### **4.4. Results**

##### **4.4.1. Reliability Estimates of the Scales**

The internal reliability of the CI was .94 (Cronbach's alpha) in the pilot study, and .88 and .90 at Time 1 and Time 2, respectively, similar to Houston et al. (2002), who reported .87. The test-retest reliability was .70 in the current study, notably lower than that (.85) obtained by Harris and Houston (2010). In that latter study, the test interval ranged from 18 to 34 days

and 91% of the participants returned to retest after 4-5 weeks.

The TAS achieved a satisfactory internal reliability: .90 in the pilot study and .89 (twice) at Time 1 and Time 2. Spielberger (1983) tested the original TAS on working adults, college students, high school students, and military recruits and obtained a similar internal reliability range of .89 to .91. The test-retest reliability in this study was .74, mirroring what Spielberger (1983) reported: .71 and .75 respectively on 173 males and 178 females in high school over a 30-day interval.

The TSS achieved internal reliability coefficients of .78 (pilot study), .79 (Time 1), and .81 (Time 2) in Japanese classes, but .86 and .90 in English classes, at respectively Time 1 and Time 2. The test-retest reliability was .71 for the E-TSS and .70 for the J-TSS. Trickett and Moos (2002) reported that the internal reliability of the TSS was .84 on 465 high school students and the test-retest reliability was .89 over a 6-week interval on 52 high school students.

The internal reliability of the J-IS was .67 (pilot study), .78 (Time 1) and .77 (Time 2). The test-retest reliability was .57. For the E-IS, internal reliability was .85 and .90 at Time 1 and Time 2, respectively, and the test-retest reliability was .63. The E-IS achieved comparable internal reliability to what Trickett and Moos (2002) obtained (.85). However, the test-retest reliability of the IS in the current study was much lower than that reported by Trickett and Moos (2002), which was .87 over a 6-week interval on 52 high school students.

The JCAS achieved an internal reliability coefficient of .95 in the pilot study. In the ensuing two full surveys, internal reliability was .93 (Time1) and .94 (Time 2) for the JCAS, and was .92 (twice) for the ECAS. The results for the FLCAS obtained from this sample are consistent with those of previous studies, e.g. .93 in Horwitz (1986) and .94 in Aida (1994). The test-retest reliability was .81 for the JCAS and .72 for the ECAS in the current study. Horwitz (1986) obtained a test-retest coefficient of .83 on 78 samples across an 8-week



interval.

In short, the scales overall achieved satisfactory reliability levels in the current study, particularly internal reliability. Yet, the test-retest reliability of the CI, the TSS, and IS was strikingly lower than that obtained in the studies cited above. The discrepancies may be attributed to the differences of sample or test interval between the current and the past studies.

#### 4.4.2. Descriptive Analyses

We segmented the score range of the CI, the TAS, the FLCAS, the TSS, and the IS into three intervals, by using two thresholds: 80% and 50% of the maximum reachable score for each scale, respectively representing low, moderate, and high level of the construct of interest. The maximum obtainable score was 70, 80, 165, 40, and 40 respectively for the CI, the TAS, the FLCAS, the TSS, and the IS. The three score intervals thus were: 14-35 (35 excluded), 35-56 (56 excluded), and 56-70 for the CI; 20-40 (40 excluded), 40-64 (64 excluded), and 64-80 for the TAS; 33-82.5 (82.5 excluded), 82.5 to 132 (132 excluded), and 132-165 for the FLCAS; and 10-20 (20 excluded), 20-32 (32 excluded), and 32-40 for the TSS and the IS. Table 4.2 presents the descriptive results of self-reports of competitiveness, trait anxiety, and anxiety in English and Japanese at either time.

*Table 4.2 Means and Standard Deviations of Competitiveness, Trait Anxiety, and FL Anxiety at Two Times (N=146)*

Measurements	<u>Means (Standard Deviations)</u>	
	Time 1	Time 2
Competitiveness	45.1 (9.06)	44.9 (8.52)
Trait Anxiety	42.5 (7.16)	41.5 (6.43)
Anxiety in English	91.5 (17.54)	91.6 (16.26)
Anxiety in Japanese	94.2 (18.41)	91.6 (18.34)

As can be seen, the participants as a whole showed moderate competitiveness and trait anxiety levels at Time 1 and Time 2. Anxiety in English and Japanese was also at a moderate level at the two moments in time. The degree of competitiveness was higher, then FL anxiety followed by trait anxiety.

To look more closely at teacher support and student involvement in both English and Japanese learning environments, we conducted descriptive analyses on the basis of individual classes (six Japanese classes). The results are reported in Table 4.3.

*Table 4.3 Means with Standard Deviations of the TSS and the IS Scores for Six Classes in Two Learning Contexts and at Two Time Points (N=146)*

Class	Size	Time 1		Time 2	
		E-TSS	J-TSS	E-TSS	J-TSS
1	25	22.8 (5.12)	32.0 (3.35)	23.4 (5.60)	32.1 (3.44)
2	22	27.2 (3.55)	32.3 (3.34)	27.7 (4.17)	31.8 (3.10)
3	28	28.4 (4.02)	31.4 (3.28)	26.4 (5.53)	31.9 (2.83)
4	26	28.0 (2.89)	32.1 (3.76)	29.7 (2.94)	32.0 (4.06)
5	24	28.8 (2.59)	29.5 (3.12)	29.0 (1.70)	29.3 (2.33)
6	21	29.1 (2.56)	31.5 (3.48)	29.2 (2.81)	30.9 (3.12)

  

Class	Size	Time 1		Time 2	
		E-IS	J-IS	E-IS	J-IS
1	25	22.6 (6.06)	28.6 (4.27)	25.0 (4.76)	29.7 (3.61)
2	22	23.6 (4.19)	30.3 (3.87)	24.0 (4.92)	30.0 (3.91)
3	28	25.1 (3.87)	29.2 (3.32)	25.3 (5.72)	30.4 (3.12)
4	26	25.1 (3.30)	28.3 (4.03)	24.9 (3.37)	29.1 (2.30)
5	24	24.3 (3.80)	27.8 (4.07)	23.0 (4.94)	28.2 (3.27)
6	21	25.7 (2.57)	28.8 (3.42)	25.4 (4.52)	28.8 (3.91)

As shown, the students overall rated their English and Japanese learning environment positively in terms of teacher support and their own involvement. At either time and in all the six classes, English teacher support was moderate, but Japanese teacher support tended to be high. Noteworthy is that Class 1 showed strikingly lower mean E-TSS scores than the other five classes. Regarding their own involvement, no class reached a high level in the context of Japanese or English learning, at either of the two time points. Indeed, the mean J-IS and E-IS scores were moderate in all the classes, though the mean IS scores were higher in the Japanese classroom. In conclusion, students felt that they received more support from Japanese teachers and more actively engaged in learning Japanese in their classroom setting.

#### **4.4.3. Correlations Among Personality Traits, Classroom Dimensions, and FL Anxiety**

In what follows, the results of Pearson's correlation analyses conducted between teacher support, student involvement, trait anxiety, competitiveness, and FL anxiety are reported

(Tables 4.4 and 4.5). Scatterplots were generated to check whether the variables to be correlated showed a curvilinear relationship before correlation analyses were performed. No such curvilinearity was found, justifying the use of Pearson's correlation analysis.

*Table 4.4* Correlations between Personality Traits, Anxiety in English, and Teacher Support and Involvement in English Classes ( $N=146$ )

	<i>Time 1 Survey</i>					<i>Time 2 Survey</i>				
	1	2	3	4	5	1	2	3	4	5
1	1.00					1.00				
2	.52 <sup>***</sup>	1.00				.48 <sup>***</sup>	1.00			
3	-.02	-.22 <sup>*</sup>	1.00			-.09	-.14	1.00		
4	.01	.09	-.36 <sup>***</sup>	1.00		-.05	.15	-.36 <sup>***</sup>	1.00	
5	-.20 <sup>*</sup>	-.10	.31 <sup>***</sup>	-.33 <sup>***</sup>	1.00	-.21 <sup>*</sup>	-.11	.44 <sup>***</sup>	-.28 <sup>**</sup>	1.00

*Note.* 1=Teacher Support; 2=Involvement; 3=Trait Anxiety; 4=Competitiveness; 5=Anxiety in English; <sup>\*\*\*</sup>  $p < .001$ ; <sup>\*\*</sup>  $p < .005$ ; <sup>\*</sup>  $p < .05$

*Table 4.5* Correlations between Personality Traits, Anxiety in Japanese, and Teacher Support and Involvement in Japanese Classes ( $N=146$ )

	<i>Time 1 Survey</i>					<i>Time 2 Survey</i>				
	1	2	3	4	5	1	2	3	4	5
1	1.00					1.00				
2	.31 <sup>***</sup>	1.00				.46 <sup>***</sup>	1.00			
3	-.03	-.24 <sup>*</sup>	1.00			-.16	-.23 <sup>*</sup>	1.00		
4	.12	.19 <sup>*</sup>	-.36 <sup>***</sup>	1.00		.20 <sup>*</sup>	.30 <sup>***</sup>	-.36 <sup>***</sup>	1.00	
5	-.18 <sup>*</sup>	-.31 <sup>***</sup>	.45 <sup>***</sup>	-.34 <sup>***</sup>	1.00	-.27 <sup>**</sup>	-.31 <sup>***</sup>	.56 <sup>***</sup>	-.42 <sup>***</sup>	1.00

*Note.* 1=Teacher Support; 2=Involvement; 3=Trait Anxiety; 4=Competitiveness; 5=Anxiety in Japanese; <sup>\*\*\*</sup>  $p < .001$ ; <sup>\*\*</sup>  $p < .005$ ; <sup>\*</sup>  $p < .05$

As shown in Tables 4.4 and 4.5, teacher support and student involvement were positively related to each other in English and Japanese learning contexts and at both Time 1 and Time 2. Correlations were moderate, a finding further endorsing what Trickett and Moos (2002) noted about the TSS and the IS measuring “distinct though somewhat related aspects of classroom learning environment” (p. 13). Teacher support was found to be significantly and negatively linked to anxiety in the two FLs at either time, whereas student involvement was only related to FL anxiety in Japanese learning context at both time points. Consequently, the involvement variable was excluded from the regression analyses for anxiety in English. What is more, a weak link was detected between Japanese teacher support and competitiveness at Time 2. Student involvement was negatively associated with trait anxiety,

but positively with competitiveness (only in Japanese learning context). Finally, significance levels were attested between trait anxiety, competitiveness, and anxiety in English/Japanese.

#### 4.4.4. Prediction of Anxiety in English

The results of regressing trait anxiety, teacher support, and competitiveness on anxiety in English using a standard method of entry are reported in this section. Following completion of regression analyses, the values of standardized residuals were checked. A residual value above 3 or below -3 suggests an outlier (Pallant, 2010). At Time 1, residual values fell in the range of -2.66 to 2.66, suggesting no outliers. However, at Time 2, residual values were in the range of -2.70 to 3.22. A further inspection revealed one case's residual value to be above 3. Nevertheless, we still kept this case in our sample, as Cook's Distance (maximum .14) suggests that this case would not seriously affect the whole model's ability to predict all cases (Field, 2013). In addition, normality, linearity, homoscedasticity, and independence of residuals were checked after each computation and no violation of these assumptions was identified at either time. Multicollinearity was not found either. Table 4.6 presents the regression results for students' anxiety in English at Time 1.

*Table 4.6 Regression Results for Anxiety in English at Time 1 (N=146)*

Variables	<i>B</i>	<i>SE B</i>	$\beta$
Competitiveness	-.48	.16	-.25**
Trait Anxiety	.54	.20	.22**
Teacher Support	-.81	.32	-.19*

*Note.*  $R^2=.186$ ; Adjusted  $R^2=.169$ ;  $F(3, 142)=10.85$ ,  $p<.001$ ; \*\* $p<.01$ ; \* $p<.05$

This table clearly reveals that the regression of trait anxiety, competitiveness, and teacher support reached a high significance level and 16.9% of the total variance in anxiety in English was explained by the three predictor variables combined. Furthermore, competitiveness and teacher support negatively predicted anxiety in English, whereas trait anxiety positively predicted anxiety in English.

Table 4.7 reports the regression results for students' anxiety in English at Time 2.

*Table 4.7 Regression Results for Anxiety in English at Time 2 (N=146)*

Variables	<i>B</i>	<i>SE B</i>	$\beta$
Trait Anxiety	.92	.20	.36***
Teacher Support	-.66	.26	-.19*
Competitiveness	-.31	.15	-.16*

*Note.*  $R^2=.241$ ; Adjusted  $R^2=.225$ ;  $F(3, 142)=15.07$ ,  $p<.001$ ; \*\*\* $p<.001$ ; \* $p<.05$

As shown in Table 4.7, the overall model explained 22.5% of the anxiety in English variance at Time 2. Competitiveness, trait anxiety, and teacher support were found to be significant predictors of anxiety in English, in line with Time 1. Nonetheless, the weighted contributions of the three predictor variables to anxiety in English that were identified at the two time points were different. At time 2, trait anxiety was the most significant predictor, followed by teacher support, and lastly competitiveness. Trait anxiety still positively predicted anxiety in English, while competitiveness and teacher support negatively predicted anxiety in English.

#### **4.4.5. Prediction of Anxiety in Japanese**

After computing standard multiple regression analyses, outliers were explored, using the same method as for English: it was checked whether there were residual values out of the range of -3 to 3. Results showed that no residual value fell beyond this scope (-1.78 to 2.61 at Time 1; -1.96 to 2.62 at Time 2). The assumptions of normality, linearity, homoscedasticity, and independence of residuals were not found to be violated either in each computation. An inspection of the tolerance values indicated that multicollinearity did not play a role for the predictors at either time. The results of regression analyses are reported in Tables 4.8 and 4.9 below.

Table 4.8 Regression Results for Anxiety in Japanese at Time 1 (N=146)

Variables	<i>B</i>	<i>SE B</i>	$\beta$
Trait Anxiety	.90	.20	.35***
Competitiveness	-.35	.16	-.17*
Involvement	-.77	.37	-.16*
Teacher Support	-.54	.40	-.10

Note.  $R^2=.286$ ; Adjusted  $R^2=.266$ ;  $F(4, 141)=14.14$ ,  $p<.001$ ; \*\*\* $p<.001$ ; \* $p<.05$

At Time 1, the overall model explained 26.6% of the variance in anxiety in Japanese (see Table 4.8). Trait anxiety, competitiveness, and involvement were found to significantly predict anxiety in Japanese, but teacher support did not. Among the three significant variables, trait anxiety was the best predictor, followed by competitiveness, then student involvement. Furthermore, trait anxiety was found to positively predict FL anxiety, while involvement and competitiveness were negative predictors.

Table 4.9 Regression Results for Anxiety in Japanese at Time 2 (N=146)

Variables	<i>B</i>	<i>SE B</i>	$\beta$
Trait Anxiety	1.26	.20	.44***
Competitiveness	-.45	.16	-.21**
Teacher Support	-.65	.41	-.12
Involvement	-.48	.42	-.09

Note.  $R^2=.390$ ; Adjusted  $R^2=.373$ ;  $F(4, 141)=22.55$ ,  $p<.001$ ; \*\*\* $p<.001$ ; \*\* $p<.01$

As indicated in Table 4.9, the overall model, which explained 37.3% of the anxiety in Japanese variance, was significant at Time 2. Trait anxiety and competitiveness were found to be significant predictors of anxiety in Japanese, with trait anxiety being the better predictor, in line with the Time 1 findings. As far as the relationship patterns were concerned, trait anxiety was a positive predictor of FL anxiety, but competitiveness was established as a negative predictor.

#### 4.5. Discussion

Descriptive analyses showed that support provided by Japanese teachers was perceived to be stronger than that provided by English teachers in the classes included in this study. The finding of a higher level of teacher support in Japanese learning contexts should not be

surprising, given that the students had more contact with their Japanese teachers due to more class hours. As a matter of fact, they took English courses for only three hours a week and did not have many opportunities to get access to the teachers. Moreover, large classes for English also constrained the students' communication with their teachers, whereas a small class size for Japanese, as indicated in Table 4.3, made teacher-student interaction easier.

The students reported a higher degree of personal involvement in learning Japanese rather than English in the classroom, perhaps attributable to the unequal balance of perceived importance of the two FLs to the learners. Indeed, the participants -being Japanese majors- are likely to consider Japanese more important than English, and were thus more motivated to learn Japanese. In addition, they had just started learning Japanese and what was presented by teachers during class hours therefore may be mostly new to the students. Closer attention was needed in order not to miss or misunderstand what the Japanese teachers presented. Conversely, the students had been learning English for years. Hence their English proficiency had reached a relatively high level and, additionally, new English knowledge was likely minimal compared to Japanese. As a result, the students could follow their English classes with more ease, which likely resulted in less engagement in the English classroom. Moreover, more frequent teacher-student interaction in Japanese classes, as suggested above, could have attracted students to the course work, but such an attraction might be lacking in the English classes. Finally, more student involvement in Japanese classwork could stem from greater support that the students received from their Japanese teachers. Likewise, higher Japanese teacher support can be explained in this way: as students more actively learned Japanese, teachers appreciated their students more and were willing to give more support.

As far as Question 1 is concerned, data analyses revealed both teacher support and student involvement to be significant negative predictors of FL anxiety, with teacher support showing better predictive power. Noteworthy is that involvement only significantly predicted

anxiety in Japanese at Time 1, a finding indicating that student involvement is probably an unstable contributing variable of FL anxiety, though the result does not permit us to reject its potential in causing learners' anxiety. In contrast, the relationship between teacher support and anxiety reached significance levels in two regression analyses, endorsing the findings by Palacios (1998) and Abu-Rabia (2004). FL learning is threatening in that it "challenges an individual's self-concept of being a competent communicator" (Horwitz et al., 1986, p. 128) and infringes one's language and cultural identity (Young, 1991). That is, learners confront a substantial number of stressors that all impact their anxiety levels. Under the circumstances, teachers' caring, trust, sympathy, and help backs up students' efforts to overcome emotional discomfort as well as their efforts to cope with learning difficulties.

For Question 2, results showed that both of the personality traits of trait anxiety and competitiveness were significant predictors of FL anxiety in each computation, with trait anxiety being the better predictor. In addition, trait anxiety was positively associated with FL anxiety, supporting Dewaele's (2013) view that FL anxiety and trait anxiety are dependent, rather than orthogonally independent. Yet, their interconnection in the current study was not strong, as witnessed by the correlation coefficient range of  $-.31$  to  $-.56$  (9.6% to 31.4% shared variance) across English and Japanese learning contexts and across the two time points, indicating that FL anxiety and trait anxiety are still distinguishable, as already noted by Dewaele (2013), MacIntyre and Gardner (1991b), and Pae (2013). As far as the mechanism through which trait anxiety impacts on FL anxiety is concerned, it probably takes a form of transfer (MacIntyre, 1999). In other words, individuals with a high level of personality anxiety may bring more anxiety into FL learning situations than those showing more emotional stability. Thus, "[language] anxiety may be viewed as a manifestation of other more general types of anxiety" (Horwitz & Young, 1991, p. 1).

The third research purpose was to seek the answer to the question whether FL anxiety



is “more sensitive to environmental factors than personality traits” (Dewaele, 2007b, p. 405). Our finding that trait anxiety and competitiveness predicted FL anxiety better than teacher support and student involvement does not support such an assumption. FL anxiety as assessed by the FLCAS appears to be more subject to the influences of personality attributes, though classroom environment also contributes to learners’ anxiety levels.

To sum up, this study has established that anxiety sources are complex and hierarchical. Complexity is observable from the finding that FL anxiety was related to both psychological and situational factors, as well as the possible inter-psychological/situational factor interactions. Hierarchical means that anxiety-provoking factors differ in their influencing power, with some being particularly important, as evidenced by the findings that teacher support predicted FL anxiety better than student involvement and trait anxiety better than competitiveness. One mission of FL anxiety source studies is to find out those relatively prominent factors. Measures with a focus on these important factors are more effective in alleviating learners’ anxiety levels (Jin, De Bot, & Keijzer, 2015b, cf. Chapter 2).

The findings of this study have two pedagogical implications. First, teachers should show their interest in and give their sympathy to their students with an eye to lowering the students’ anxiety levels in the FL classroom, evident from the finding that perceived teacher support negatively predicted FL anxiety in both our study and several others before us. More support from teachers could also encourage students to actively participate in class activities and be more attentive to their teachers. The influences of teacher support may also extend to the classroom dimensions other than student involvement (Palacios, 1998). Second, teaching practitioners should ideally have a working knowledge of their students’ personality characteristics, as we have suggested earlier in Jin et al. (2015b, cf. Chapter 2) on the basis of findings on competitiveness and self-esteem vis-à-vis FL anxiety. A relatively stronger association of FL anxiety with trait anxiety rather than with other variables under evaluation

in the current study calls on teachers to pay special attention to students of high trait anxiety, as they may be particularly anxious in FL classes.

#### **4.6. Conclusion**

This study has further substantiated that teacher support plays a role in controlling learners' FL anxiety levels and that learners' degree of personality anxiety truly matters in the context of FL learning, because students with a highly anxious personality run the risk of experiencing more intense FL anxiety, which in turn may lead to underachievement in their FL learning. This study also established a classroom environment characterized by less student involvement and low competitiveness as two potential anxiety-provoking factors, though we cannot conclude that they are two causal factors of FL anxiety. This is partly because the relationship between involvement and FL anxiety was rather weak (only significant at Time 1 for anxiety in Japanese) and the finding for competitiveness in relation to FL anxiety deviated from previous studies. Hence, researchers may consider looking more closely at the two factors of student involvement and competitiveness in future studies.

