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*Published in:*  
Studies in Second Language Learning and Teaching

*DOI:*  
[10.14746/sslIt.2017.7.1.6](https://doi.org/10.14746/sslIt.2017.7.1.6)

**IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.**

*Document Version*  
Publisher's PDF, also known as Version of record

*Publication date:*  
2017

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*

Jin, Y., de Bot, K., & Keijzer, M. (2017). Affective and situational correlates of foreign language proficiency: A study of Chinese university learners of English and Japanese. *Studies in Second Language Learning and Teaching*, 7(1), 105-126. <https://doi.org/10.14746/sslIt.2017.7.1.6>

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*Affective and situational correlates of foreign language proficiency: A study of Chinese university learners of English and Japanese<sup>1</sup>*

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Abstract

The study explores the effects of teacher support and student cohesiveness on foreign language (FL) learning outcomes and compares their effect with that of FL anxiety. One hundred and forty-six first-year Chinese undergraduates of Japanese, who were also learning English, participated in two surveys that were administered over a 2-month interval. Data were collected using the Foreign Language Classroom Anxiety Scale (Horwitz, Horwitz, & Cope, 1986), the Teacher Support Scale (Trickett & Moos, 2002), the Affiliation Scale (Trickett & Moos, 2002), the English Proficiency Scale, and the Japanese Proficiency Scale. It was found that (a) student cohesiveness was a positive predictor of FL proficiency, (b) teacher support, which was positively related to student cohesiveness and negatively to FL anxiety, did not show a direct relationship with FL proficiency, and (c) FL anxiety,

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<sup>1</sup> This paper is based on the first author's PhD project.

which was negatively associated with FL proficiency, showed a better predictive power than student cohesiveness and teacher support.

*Keywords:* teacher support; student affiliation; foreign language anxiety; foreign language proficiency

## 1. Introduction

Understanding the factors affecting foreign language (FL) learning has been a crucial task in the field of SLA. Many studies have shown that the success and failure of FL learning are related to a myriad of internal and external learner variables as well as their interactions (e.g., Dewaele, 2007; Ellis, 2008). One such external factor is classroom environment, which itself is a multi-faceted concept (Trickett & Moos, 2002). Teacher support and student cohesiveness, as two key dimensions of classroom environment, have been directly shown to be essential for a fruitful FL learning experience, but only a fairly small number of studies currently exist. Furthermore, their effects have not been related to FL anxiety, one well-recognized negative correlate of FL learning. Thus, in this study involving two tests over a 2-month interval, we investigated quantitatively the impact of these two classroom dimensions on FL proficiency as well as comparing their effect with that of FL anxiety in the English and Japanese learning contexts of Chinese university students. With this study, we hope to further clarify the roles of the two classroom variables of teacher support and student cohesiveness in FL learning as well as that of FL anxiety. It should be noted that to do a study in two FL learning contexts offers the possibility of making a comparison between the two languages, but this is not the study's main objective. Rather, we aimed to assess the roles of FL anxiety, teacher support, and student cohesiveness as general constructs, by collecting data over two contexts and time points.

## 2. Theoretical background

Gardner and MacIntyre (1992) argue that there are three categories of individual characteristics that affect L2 achievement: (a) cognitive variables (e.g., intelligence and language aptitude), (b) affective variables (e.g., motivation, language anxiety, and personality attributes), and (c) a miscellaneous category (e.g., age and socio-cultural experiences). The three categories of variables have been collectively treated as individual difference factors by Dörnyei (2005). In addition to the personal properties that can determine the different paths of the FL learning process and the interpersonal disparities in outcomes, the social

context, particularly the classroom environment, should also be taken into account, at least to some extent. In what follows, we focus on those studies that probe the effect of FL anxiety, itself an important negative factor in FL learning, and two crucial variables of social support in the classroom, namely student cohesiveness and teacher support, on FL learning.

## 2.1. FL anxiety and FL learning

In their seminal work, Horwitz, Horwitz, and Cope (1986) introduced the concept of FL anxiety and defined it 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" (p. 128). From then on, there has been a gradual change in our understanding of the construct of FL anxiety. For instance, FL anxiety has been gradually recognized to include not only general FL anxiety as assessed by the Foreign Language Classroom Anxiety Scale (FLCAS; Horwitz et al., 1986), but also skill-based anxieties, that is, listening, speaking, reading, and writing anxiety (e.g., Elkhafaifi, 2005; Gkonou, 2011; Saito, Horwitz, & Garza, 1999).

FL anxiety can be quite pervasive among learners. Horwitz (2000) notes that around one third of American college students experience moderate to severe levels of FL anxiety. In Liu and Jackson's (2008) study, more than one third of the 547 Chinese students felt anxious in the English classroom. Furthermore, even language teachers suffer from anxiety. Horwitz (1996) maintains that FL teachers who lack confidence about their own target language proficiency, who pursue an idealized level of proficiency, or who encountered a good deal of anxiety in their own language learning, are likely to experience anxiety. Owing to the pervasiveness of FL anxiety, research looking into its impact on FL learning is crucial. Cross-sectional research across different language classrooms in different countries has documented a negative link between general FL anxiety and FL achievement/proficiency (e.g., Aida, 1994; Cheng, Horwitz, & Schallert, 1999; Elkhafaifi, 2005). Recently, Jin, De Bot, and Keijzer (2015) found that the diachronic changes in anxiety in Japanese/English assessed by the FLCAS were negatively associated with the development of self-reported overall Japanese/English proficiency as well as Japanese/English proficiency in relation to the four subskills (e.g., listening and speaking). In addition, a negative link also extends to writing/listening/reading anxiety and writing/listening/reading achievement or proficiency (Cheng et al., 1999; Zhang, 2013; Zhao, Guo, & Dynia, 2013). Correlation is not causation, and the findings highlight the possible reciprocal effects between FL anxiety and FL achievement/proficiency, rather than indicating a direct causal relationship.

Researchers also probed the effect of FL anxiety on the more subtle aspects of FL learning (MacIntyre & Gardner, 1994). Gregersen (2003) looked at

differences between anxious and non-anxious students in regard to the number of errors in oral expression as well as in their ability to monitor and perceive errors. The students themselves were all L1 Spanish-speaking university students of English. The highly anxious students ( $N = 4$ ) scored between 111 and 121 out of a maximum of 165 on the FLCAS and the less anxious students (again  $N = 4$ ) obtained scores ranging from 51 to 76. Anxious students were found to make more errors, to self-repair more often, and to recognize errors less often when reflecting on their output with the researcher. In addition, the anxious students used the L1 more often as part of a communicative compensation strategy and overestimated the number of errors they had made. These findings suggest that anxious students may experience more task-irrelevant cognitive inference, pay more attention to the correctness of linguistic forms than to the content of the messages out of concern for others' evaluations, face more difficulties in retrieving the learnt materials, and tend to have a self-derogatory bias (Gregersen, 2003). Rassaei (2015) was interested in finding out the effect of FL anxiety on learners' perceptions of recasts and metalinguistic feedback, two types of oral corrective feedback. Results showed that low-anxiety students perceived significantly more corrective feedback of either of the two types than high-anxiety ones. The reason may be that, owing to cognitive distraction arising from anxiety, highly anxious students largely failed to focus on the task of identifying the corrective feedback provided by the interlocutors.

In sum, previous findings have supported the view that FL anxiety interferes with FL learning and should be controlled as much as possible (e.g., Dörnyei, 2005; Horwitz, 2001; MacIntyre & Gardner, 1991). There are, however, also other views on this. Sparks, Ganschow and their colleagues (Sparks & Ganschow, 1991, 1993a, 1993b, 1995; Sparks, Ganschow, & Javorsky, 2000; Sparks, Ganschow, & Pohlman, 1989) have contended that FL anxiety is primarily a consequence of FL learning difficulties, rather than a causal factor for FL underachieving. This claim has met with strong opposition from MacIntyre (1995) and Horwitz (2000). As a matter of fact, "the potential of anxiety to interfere with learning and performance is one of the most accepted phenomena in psychology and education" (Horwitz, 2000, p. 256). Therefore, the influences of FL anxiety on FL learning should not be ignored, but it should be kept in mind that a constellation of additional factors such as motivation, language aptitude, learning styles, personality traits, and situational variables also play a role.

## 2.2. Classroom climate and FL learning

Goodenow (1993) refers to classroom climate as "the 'objective' perception of the social and emotional features of a class, the average or shared perception

of class members" (p. 29). Within that frame, there has traditionally been abundant research into social support in general and supportive classrooms in particular (Goodenow, 1993). A focus on perception is also meaningful, because as House (1981) puts it, "no matter how much your spouse or supervisor feels or acts supportive toward you, there will be little effect on you unless you, in fact, perceive them as supportive" (p. 27). Indeed, it is possible that a gap exists between the quality and quantity of support given by instructors/peers and the quality and quantity of support ultimately perceived by students. Cultural norms, learners' personality, temperament, mood, and/or language-learning growing experiences may block or distort the support given by teachers/peers.

As such, teacher support is an essential classroom dimension, defined as "the help and friendship the teacher shows toward students; how much the teacher talks openly with students, trusts them, and is interested in their ideas" (Trickett & Moos, 2002, p. 1). Overall, it "involves characteristics such as caring, friendliness, understanding, dedication, and dependability" (Ryan & Patrick, 2001, p. 440), though some researchers emphasize academic support (e.g., Chen, 2008). Teacher support has been considered pivotal for learners' academic outcomes. Piechurska-Kuciel (2011) has mentioned that "[without teacher support and guidance], successful learning may be very difficult, if not impossible" (p. 84).

Empirical studies have directly examined the relationship between perceived teacher support and FL academic outcomes, but not while focusing on adult learners. Chen (2005) found that perceived academic support was directly and indirectly (through perceived engagement) linked with end-of-semester grades in the subjects of English, mathematics and Chinese for secondary school adolescents in Hong Kong. Piechurska-Kuciel (2011) targeted Polish secondary school pupils of English. She found that final grades and self-assessment of listening, speaking, reading, and writing were significantly higher in students with high levels of teacher support than those of students who perceived a low level of teacher support.

A second factor contributing to classroom environment is student cohesiveness, which has been conceived of as "the friendship students feel for each other, as expressed by getting to know each other, helping each other work with homework, and enjoying working together" (Trickett & Moos, 2002, p. 1). Student cohesiveness belongs to a broader construct of group cohesion: the integrity, solidity, social integration, unity, and "groupness" of a group (Forsyth, 2014, p. 10). Dörnyei (1997) maintains that "[group] characteristics and group processes significantly contribute to success or failure in the classroom and directly [affect] the quality and quantity of learning within the group" (p. 485). Hence, it is reasonable to hypothesize that learners with a positive perception of inter-peer relatedness in the FL classroom should be able to develop a higher level of proficiency. Gascoigne's (2012) study sheds light on such a hypothesis. Adopting

the 18-item Connected Classroom Climate Inventory (Dwyer et al., 2004), Gascoigne (2012) probed the relationship between student-to-student connections and French course grades in a study involving three groups of students respectively attending beginning, intermediate, or advanced courses at the University of Nebraska. Data analysis revealed a significant positive link between the classroom climate and grades for each learner group.

To sum up, many studies have supported the view that FL anxiety interferes with FL learning. In contrast, there is little research—to our knowledge—that directly supports the view that teacher support and student cohesiveness affect FL outcomes. Therefore, a focus on these two dimensions of classroom environment in FL learning is very much needed. As for FL anxiety, studies comparing its effect on FL learning with that of other factors are worth undertaking in order to establish the relative importance of this affective factor in FL learning. Thus, in this study, we sought to directly examine the impact of teacher support and student cohesiveness on language outcomes in FL learning contexts and to compare their effect with that of FL anxiety. Specifically, this study aimed to answer the following research questions:

RQ1: Do student cohesiveness and teacher support have an effect on FL proficiency levels?

RQ2: Does FL anxiety affect FL proficiency levels more than teacher support and/or student cohesiveness?

### 3. Methodology

#### 3.1. Design of the study

We situated our study within the context of Chinese university students' learning English and Japanese as FLs. Within that context, a design with two measurements over time was adopted: Data relating to teacher support and student cohesiveness in English/Japanese classes, to anxiety in English/ Japanese, and to English/Japanese proficiency were collected twice with a 2-month interval. In short, we examined the effects of FL anxiety, teacher support, and student cohesiveness on FL proficiency in English and Japanese learning contexts, at two moments in time.

#### 3.2. Participants

Participants were 146 Chinese students, all majoring in Japanese and simultaneously studying English. They were recruited from six Japanese classes at two universities located in the Henan Province in the central part of China and one university in the Shandong Province in East China. All the students were taking

more than one Japanese course, but only one compulsory English course. Of the 146 students, 21 were male and 125 female, with ages ranging from 17 to 23 ( $M = 19.57$ ,  $SD = 1.00$ ). Moreover, the students mainly came from less developed areas ( $M = 1.9$ ,  $SD = 1.21$ ; home location options: 1 = *village*, 2 = *township*, 3 = *county*, 4 = *prefecture city or above*) and their parents overall had not received much education (parental education options: 1 = *primary school*, 2 = *junior school*, 3 = *senior school*, 4 = *college*):  $M = 2.4$ ,  $SD = .87$  for fathers and  $M = 2.2$ ,  $SD = .91$  for mothers. At the time of the first test, all participants had been studying English for quite a long time ( $M = 9.05$  years,  $SD = 1.88$ ), with individuals' learning experience ranging from 4.5 to 13.5 years. However, all participants, except one, started learning Japanese only after university enrollment ( $M = .52$  years,  $SD = .29$  up to Time 1 test).

### 3.3. Instruments

Apart from the Demographic Information Index (DIQ) used to elicit the participants' background information: name, age, gender, home location, parental education, and duration of English and Japanese learning (part of the demographic information was reported above), five other scales constituted the basic measures for this study, including the Teacher Support Scale (TSS; Trickett & Moos, 2002), the Affiliation Scale (AS; Trickett & Moos, 2002), the Foreign Language Classroom Anxiety Scale (FLCAS; Horwitz et al., 1986), the English Proficiency Scale (EPS), and the Japanese Proficiency Scale (JPS). The DIQ, the EPS, and the JPS were constructed in Chinese by the current researchers. The remaining three, which were originally developed in English, were translated into Chinese with the procedures as follows: One Chinese-English bilingual holding an MA applied linguistics degree or the Chinese researcher in this study translated the scales into Chinese (the FLCAS was translated into Chinese by referring to Abaohuier, 2011 and Guo and Wu, 2008; for the TSS and the AS, the existing Chinese versions that were provided by Mind Garden, Inc., the copyright holder of the two scales, were referred to). The Chinese researcher in this study discussed the translated versions with a fourth year university student who was enrolled in a Chinese program and had a good command of English until the minor discrepancies between them were resolved. In addition, the translated measures were piloted before administering them to the 146 participants (see the procedures section). The details of the five basic measures are presented in Table 1.



Table 1 Description of scales

Scales (# of items)	Description	Response format	Score range	Sample items
E/JCAS (33)	FLCAS adapted by changing <i>foreign language</i> into <i>English</i> (ECAS) or <i>Japanese</i> (JCAS) to measure anxiety in the English or Japanese classroom. Higher scores indicate more intense anxiety.	1 = <i>strongly disagree</i> , 2 = <i>disagree</i> , 3 = <i>neither agree nor disagree</i> , 4 = <i>agree</i> , 5 = <i>strongly agree</i>	33-165	"In English class, I can get so nervous I forget things I know." "It embarrasses me to volunteer answers in my Japanese class."
E/J-TSS <sup>1</sup> (10)	TSS adapted by clearly indicating <i>English</i> (E-TSS) or <i>Japanese classes</i> (J-TSS) for some items to elicit the participants' general perceptions about teacher support in classes for the two FLs under investigation. Higher scores indicate stronger support.	1 = <i>strongly disagree</i> , 2 = <i>disagree</i> , 3 = <i>agree</i> , 4 = <i>strongly agree</i>	10-40	"English teacher is more like a friend than an authority." "Japanese teacher takes a personal interest in students."
E/J-AS <sup>1</sup> (10)	AS adapted by clearly indicating <i>English</i> (E-AS) or <i>Japanese classes</i> for some items to elicit the participants' general perceptions about student connections in classes for the two FLs. Higher scores show a closer affiliation among students	1 = <i>strongly disagree</i> , 2 = <i>disagree</i> , 3 = <i>agree</i> , 4 = <i>strongly agree</i>	10-40	"A lot of friendships have been made in (J-AS) English classes." "Students in Japanese classes aren't very interested in getting to know other students."
EPS (20)	A measure of intermediate level of English, developed by the current researchers on the basis of the <i>Curriculum Standard for Senior High School English (Experimental)</i> (MOE, 2003). It has four subscales (5 items in each) pertaining to proficiency in four subskills, respectively, i.e., listening, speaking, reading, and writing. Higher scores indicate higher levels of proficiency. The effectiveness of the EPS in measuring English proficiency was validated against teacher ratings of students' proficiency in the four subskills (1 = <i>poor</i> , 2 = <i>fair</i> , 3 = <i>good</i> , 4 = <i>very good</i> , 5 = <i>excellent</i> for each skill; teacher ratings range from 4 to 20). The validation process is introduced in Section 3.4 and the validation result is reported in Section 4.1.	1 = <i>almost impossible</i> , 2 = <i>difficult</i> , 3 = <i>a bit difficult</i> , 4 = <i>easy</i>	20-80	"In daily interpersonal communication, I can effectively express opinions, blames, and complaints."
JPS (20)	A measure of elementary level of Japanese, developed by the current researchers on the basis of the <i>Curriculum Standard for Japanese Majors at Elementary Level in Higher Education</i> (MOE, 2001) (two items were adapted from Xu, 2010). It has four subscales (5 items in each) pertaining to proficiency in four subskills, respectively, i.e., listening, speaking, reading, and writing. Higher scores suggest higher levels of proficiency. The effectiveness of the JPS in measuring Japanese proficiency was validated against teacher ratings of students' proficiency in the four subskills (1 = <i>poor</i> , 2 = <i>fair</i> , 3 = <i>good</i> , 4 = <i>very good</i> , 5 = <i>excellent</i> for each skill; teacher ratings range from 4 to 20), as introduced	1 = <i>almost impossible</i> , 2 = <i>difficult</i> , 3 = <i>a bit difficult</i> , 4 = <i>easy</i>	20-80	"I can understand daily conversations on the topic of school life."

Section 3.4. The validation result is reported in Section 4.1.

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*Note.* <sup>1</sup> The TSS and the AS were originally formulated using a true-false format. In this study, a 4-point Likert format was adopted to increase the sensitivity of the two scales.

### 3.4. Procedures

Data were collected in three steps. Step 1 was a pilot study that itself consisted of two parts. In Part 1, 41 first-year Japanese majors recruited from two intact classes at a university in West China's Shaan'xi Province were tested during regular class hours. All measures were first pilot tested in Class 1 (21 students). After that, a few Chinese words in the measures, with the exception of the DIQ, were adjusted with the help of a Chinese teacher who was teaching English at the pilot study university, following the results of internal reliability computations, and the resulting measures were retested in Class 2 (20 students). Importantly, the 20 students in Class 2 did not report any difficulties in understanding the items in the scales. As the JCAS and the ECAS were identical except for the respective medium of *English* or *Japanese*, only the JCAS was tested as part of the pilot. Likewise, the TSS and the AS were only tested for Japanese classes. In short, the pilot results (internal reliability) for the JCAS, the J-TSS, the J-AS, the EPS, and the JPS as reported in Section 4.1 were based on Class 2. Part 2 of the pilot design aimed to find out whether the EPS and the JPS could effectively measure language proficiency. To that end, the two scales that had already shown adequate reliability levels in the Class 2 samples were administered to 27 freshmen of Japanese at another university in East China's Shandong Province. This is because this Shandong university more closely resembles, in terms of level, the three universities from which the 146 participants were sampled. Obtaining valid results in this context would thus be a better indication of the effective use of the scales in the full surveys. Teacher ratings (two teachers for Japanese and English, respectively) of the 27 students' English and Japanese listening, speaking, reading, and writing proficiency were also collected. There were 26 valid student self-reports for each scale. Thus, the EPS and the JPS were validated by correlating the 26 self-reports and the associated teacher ratings.

Two tests administered over a 2-month interval formed Step 2 of the design. They were administered to the 146 participants in an out-of-class session. At both testing points, participants attending the same university completed a test battery in a classroom with no teacher present. The questionnaires that were administered were arranged in the following order: the DIQ (excluded at Time 2), the J-AS, the J-TSS, the JPS, the EPS, the JCAS, the E-AS, the E-TSS, and the ECAS. Prior to the distribution of questionnaires at Time 1, the research purposes were only partly revealed. The students were also informed that their participation was

voluntary and would not influence their course grades in any way. They were expected to respond honestly and independently. At Time 2, the instructions were shortened. Questionnaires were checked immediately after being collected for missing answers. As soon as unanswered items were detected, those subjects were traced and asked to supply the missing responses. Step 3 of the design involved data registration, during which the negatively-worded items in the scales were reverse-coded.

## 4. Results

### 4.1. Reliability levels

Table 2 reports the psychometric properties of the five basic measures, including internal and test-retest reliability. As can be seen, the scales overall showed satisfactory reliability levels, in particular regarding internal reliability. The internal reliability of the FLCAS in Chinese was as high as other language versions used in previous studies that looked at university students, such as .94 in Aida (1994) and .95 in Zhao et al. (2013). These consistent findings attest to the universality of FL anxiety phenomena across cultural and instructional contexts. The test-retest reliability of the JCAS was almost the same as what Horwitz (1986) reported (.83) and was higher than that of the ECAS.

Table 2 Reliability levels of the scales ( $N = 146$ )

Measure	Internal reliability ( $\alpha$ )			Test-retest reliability ( $r$ )
	Pilot study	Time 1	Time 2	
ECAS	N/A	.92	.92	.72***
JCAS	.95	.93	.94	.81***
E-TSS	N/A	.86	.90	.71**
J-TSS	.78	.79	.81	.70**
E-AS	N/A	.73	.80	.63**
J-AS	.77	.68	.71	.50**
EPS	.95	.92	.92	.68**
JPS	.91	.92	.92	.68**

*Note.* N/A = not available; test-retest reliability coefficients were calculated on the basis of Times 1 and 2; \*\*\* $p < .001$ ; \*\* $p < .01$ .

Generally speaking, the internal reliability of the TSS and the AS were similar to what Trickett and Moos (2002) reported in their 465 normative high school samples: .84 for the TSS and .74 for the AS. The relatively low internal reliability of the AS in both Trickett and Moos (2002) and our study reflects the design of the Classroom Environment Scale (CES) to which the AS belongs as one

of the subscales: The nine CES subscales aim to assess relatively independent and broad constructs, so items diverse in content were selected at the cost of higher inter-item relatedness in each subscale. In addition, the E-TSS/AS achieved better internal reliability than the J-TSS/AS. This is probably because profiling the degree of support of several Japanese teachers and the social bond among students in more than one Japanese course led to less homogenous responses to the items of the J-TSS/AS. As for the test-retest reliability of the TSS and the AS, the current findings were notably lower than what Trickett and Moos (2002) reported on the basis of their 52 normative samples over a 6-week interval: .89 for the TSS and .73 for the AS. The factors contributing to the discrepancy may include the fact that different categories of participants were used (university students vs. high school pupils) and the difference in the test-retest interval (8 vs. 6 weeks).

As noted in Section 3.4, the EPS and the JPS were validated by correlating students' self-reports on the two scales with teacher ratings. The results showed that the internal and external ratings were highly associated: .63 for English proficiency and .71 for Japanese proficiency, underscoring the validity of the EPS and the JPS in measuring language proficiency. Moreover, the two scales revealed high levels of internal reliability at either time point as well as adequate test-retest reliability.

#### 4.2. Descriptive analysis

Table 3 presents the mean scores and standard deviations for anxiety and proficiency in English and Japanese of the 146 Chinese students. As can be seen, the participants reported a high level of FL proficiency at the two testing points. Anxiety in the two FLs was moderate at either time. To take a closer look at teacher support and student cohesiveness in the learning contexts of the two FLs, the descriptive statistics for the E/J-TSS and the E/J-AS scores are reported based on individual classes (i.e., six Japanese classes), as presented in Table 4.

Table 3 Means (with standard deviations) of FL anxiety and FL proficiency at both testing times ( $N = 146$ )

Measurements	Time 1	Time 2
English proficiency	66.5 (8.96)	66.9 (8.28)
Japanese proficiency	61.1 (9.94)	63.2 (9.33)
Anxiety in English	91.5 (17.54)	91.6 (16.26)
Anxiety in Japanese	94.2 (18.41)	91.6 (18.34)

As shown, the students in each class perceived a moderate level of teacher support and student cohesiveness when learning English at Time 1 and Time 2. It should be noted that the E-TSS mean for Class 1 was strikingly lower than that for the other classes at each time. Student cohesiveness in the Japanese

learning context was still moderate at either time for each class, but the degree of teacher support tended to be high. In addition, the J-TSS/AS mean was higher than the mean E-TSS/AS scores for each class (with the exception of student cohesiveness for Class 5 at Time 2). Student cohesiveness showed a tendency to become stronger with time, whereas teacher support did not.

Table 4 Means (with standard deviations) of the TSS and the AS scores 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-AS	J-AS	E-AS	J-AS
1	25	23.4 (3.84)	26.2 (3.63)	25.0 (4.41)	28.3 (3.46)
2	22	24.7 (2.97)	26.5 (3.10)	25.8 (3.68)	26.7 (2.49)
3	28	23.4 (3.08)	25.3 (3.03)	24.3 (3.81)	26.2 (3.09)
4	26	25.7 (2.70)	26.4 (2.84)	26.5 (2.35)	27.0 (2.25)
5	24	25.2 (2.46)	25.6 (2.10)	26.0 (2.40)	25.6 (2.94)
6	21	26.4 (2.96)	27.5 (2.87)	27.0 (3.03)	28.7 (3.06)

#### 4.3. Simple correlation analysis

Table 5 presents the results of simple correlation analyses between FL anxiety, teacher support, student cohesiveness, and FL proficiency. Prior to any computation, the relationship between the variables to be correlated was observed via scatterplots. No curvilinear patterns were found, warranting the use of simple correlations.

Teacher support and student cohesiveness were found to be positively related, with the correlation being stronger in the English learning context. The two classroom variables showed a negative link with language anxiety in English and Japanese learning contexts at both Time 1 and Time 2. In addition, student cohesiveness was significantly and positively associated with FL proficiency in the two learning contexts, but there was no significant correlation between teacher support and FL proficiency. Hence, teacher support was excluded from the ensuing regression analysis. Moreover, anxiety in English/Japanese was negatively correlated with proficiency in English/Japanese at either time, showing a stronger relationship than that between student cohesiveness in the English/Japanese classroom and English/Japanese proficiency. Figure 1 was drafted to map the correlational findings of this study.

Table 5 Correlations between the E/J-TSS, the E/J-AS, the E/JCAS and the E/JPS scores at two times ( $N = 146$ )

Variable	Time 1				Time 2			
	TS-E	SC-E	AE	EP	TS-E	SC-E	AE	EP
TS-E	1.00				1.00			
SC-E	.46***	1.00			.68***	1.00		
AE	-.20*	-.23*	1.00		-.21*	-.22*	1.00	
EP	.13	.36***	-.57***	1.00	.11	.20*	-.55***	1.00

Variable	Time 1				Time 2			
	TS-J	SC-J	AJ	JP	TS-J	SC-J	AJ	JP
TS-J	1.00				1.00			
SC-J	.32***	1.00			.40***	1.00		
AJ	-.18*	-.32***	1.00		-.27**	-.20*	1.00	
JP	.09	.42***	-.57***	1.00	.12	.35***	-.50***	1.00

Note. TS-E/J = teacher support in English/Japanese classroom; SC-E/J = student cohesiveness in English/Japanese classroom; AE/J = anxiety in English/Japanese; E/JP = English/Japanese proficiency; \*\*\* $p < .001$ ; \*\* $p < .005$ ; \* $p < .05$ .

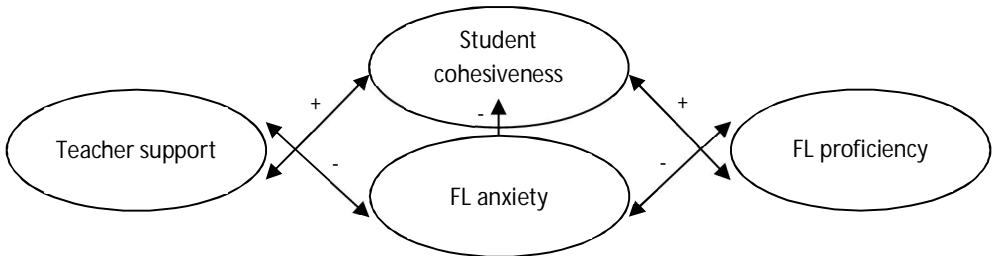


Figure 1 The relationships between student cohesiveness, teacher support, FL anxiety, and FL proficiency (+ = positive correlation; - = negative correlation)

#### 4.4. Regression analysis for English proficiency

In Table 6, the findings of regressing student cohesiveness and anxiety on English proficiency in a standard procedure at the two times are presented. Following the regression analyses, standardized residual values were checked, which ranged from -2.96 to 2.16 for Time 1 and from -3.11 to 1.93 for Time 2. Pallant (2010) warns researchers that standardized residuals falling out the range of -3 to 3 suggest outliers in the data. A further inspection revealed the standardized residual of one case at Time 2 was -3.11. Yet, we did not remove this case, as Cook's distance (maximum .24) showed that this case would pose no major problems regarding the overall model's predictive ability. In addition, the assumptions of normality, linearity, homoscedasticity, and independence of residuals were not found to be violated. For the computations at Times 1 and 2, a weak correlation of student cohesiveness with anxiety in English indicated no multicollinearity between the predictor variables, and this was confirmed by the VIF value of 1.05 (twice).

Table 6 Regression results for English proficiency at two times ( $N = 146$ )

Times	Variables	<i>B</i>	<i>SE B</i>	$\beta$
1	Anxiety in English	-.26	.04	-.51***
	Student cohesiveness	.69	.19	.24***
2	Anxiety in English	-.27	.04	-.53***
	Student cohesiveness	.19	.17	.08

Note. Time 1:  $R^2 = .376$ ; adjusted  $R^2 = .367$ ;  $F(2, 143) = 43.07$ ,  $p < .001$ ; \*\*\* $p < .001$ . Time 2:  $R^2 = .306$ ; adjusted  $R^2 = .296$ ;  $F(2, 143) = 31.55$ ,  $p < .001$ ; \*\*\* $p < .001$ .

At Time 1, the regression of anxiety in English and student cohesiveness was highly significant. Anxiety in English and student cohesiveness were found to be negative and positive predictors of English proficiency, respectively. Anxiety was a better predictor than student cohesiveness. However, at Time 2, only anxiety in English significantly and negatively predicted English proficiency.

#### 4.5. Regression analysis for Japanese proficiency

Standard multiple regression analyses were performed to investigate and compare the effects of student cohesiveness and anxiety in Japanese on Japanese proficiency, the results of which are reported in Table 7. As for English, the range of standardized residual values was checked after each computation. At Time 1, residual values fell in the range of -2.46 to 2.31, suggesting no outliers for the regression analysis, which therefore did not result in any data cleansing. At Time 2, the minimum residual score was -3.90 and the maximum was 2.34. A closer inspection revealed the standardized residuals of two cases to be either -3.03 or -3.90. Yet, we kept these two cases as Cook's distance (maximum .12) showed that they would pose no major problems regarding the whole model's predictive ability. Moreover, there was no violation of normality, linearity, homoscedasticity, and independence of residuals at either time. Multicollinearity was also not found (VIF = 1.12 at Time 1 and 1.04 at Time 2).

Table 7 Regression results for Japanese proficiency at two times ( $N = 146$ )

Times	Variables	<i>B</i>	<i>SE B</i>	$\beta$
1	Anxiety in Japanese	-.26	.04	-.49***
	Student cohesiveness	.87	.23	.26***
2	Anxiety in Japanese	-.23	.04	-.44***
	Student cohesiveness	.80	.22	.26***

Note. Time 1:  $R^2 = .386$ ; adjusted  $R^2 = .377$ ;  $F(2, 143) = 44.96$ ,  $p < .001$ ; \*\*\* $p < .001$ . Time 2:  $R^2 = .311$ ; adjusted  $R^2 = .301$ ;  $F(2, 143) = 32.28$ ,  $p < .001$ ; \*\*\* $p < .001$ .

As shown in Table 7, the regression of anxiety in Japanese and student cohesiveness at both time slots reached significance levels. Anxiety significantly negatively predicted Japanese proficiency, more than student cohesiveness predicted it positively. The affective and situational factors negatively and positively predicted Japanese proficiency, respectively.

## 5. Discussion

This study investigated the effects of teacher support and student cohesiveness on FL learning and compared their effect with that of FL anxiety. Descriptive analyses revealed a higher level of perceived teacher support and student cohesiveness in the Japanese classroom than in the English classroom (the E-AS mean was slightly higher than the J-AS mean only in Class 5 at Time 2). We discussed the reasons for stronger Japanese teacher support in Jin, De Bot, and Keijzer (2016): One reason may be the much smaller size of Japanese classes, which may also explain the discrepancy in students' social affiliation between the two FL learning contexts. That is, the much smaller number of students in Japanese classes may have facilitated more peer communication and mutual understanding. As Dewaele and MacIntyre (2014) remark: "Smaller groups are more conducive to closer social bonds, a positive informal atmosphere, and to more frequent use of the FL" (p. 264). Another explanation for the higher degree of student cohesiveness in the Japanese classes may be related to a large difference in Japanese and English class hours. The participants spent much more time in Japanese classes, increasing peer-to-peer contact. Moreover, two schools from which Classes 2 to 6 were recruited offered Japanese conversation courses. No such courses were available for English at the two universities, and that possibly restrained the enhancement of friendly relations among students in English classes achieved through interactive activities.

Returning to the research questions, RQ 1 was formulated to determine whether student cohesiveness and teacher support have an effect on FL proficiency levels. Regression analysis revealed student cohesiveness to be a positive predictor of FL proficiency in both the English and Japanese learning contexts and at both testing times. Teacher support did not significantly predict FL proficiency, however, which was an unexpected finding. Yet, our study is not the only one to find a non-significant relationship between perceived teacher support and academic outcomes: Chen (2008) found that perceived academic support from teachers was related to academic outcomes for Form 3 students (mean age = 14.5 years), but not for Forms 4 and 5 (mean age = 15.5 and 16.7 years). Reflecting on these findings, Chen (2008) noted that "increased cognitive abilities may prompt older adolescents to seek independence from adults" (p. 192). This may be equally applicable to the current study's finding obtained on the



basis of adult participants. In addition, it should be noted that the participants in this study had more than one Japanese teacher. The TSS was used to elicit the participants' holistic perceptions of these teachers' support. We hypothesize that a significant relationship between the support variable and FL learning outcomes might have been obtained if the TSS had targeted one particular teacher and only grades of the course taught by that teacher had been used.

Indeed, a significant positive link between teacher support and peer cohesiveness was found, suggesting that the two relationship dimensions in the classroom may well influence each other. In addition, teacher support was negatively correlated with FL anxiety. The findings suggest that perceived teacher support is more likely to determine how well university learners, or more specifically college-level beginners, learn a FL—by influencing students' perceptions of inter-peer connection and/or learners' anxiety levels. In brief, this study revealed an indirect relationship between teacher support and FL learning outcomes.

RQ 2 asked whether FL anxiety affects learners' FL proficiency levels more than teacher support and/or student cohesiveness. Data analysis showed that anxiety in English/ Japanese negatively predicted English/Japanese proficiency at either time. Moreover, anxiety appeared to be a stronger predictive factor than student cohesiveness and teacher support. All the findings again point to the necessity to control learners' FL anxiety levels. In addition, this study attested to a negative correlation of FL anxiety with student cohesiveness, mirroring Palacios' (1998) finding and suggesting a possible reciprocal influence between the affiliation and anxiety variables: A lack of social cohesion among learners in the classroom may evoke FL anxiety and FL anxiety may in turn affect the learners' cognitive evaluation of their learning environment.

In addition, the finding that FL anxiety is a negative predictor of FL proficiency levels identified across both learning contexts and both testing times does not mean that students with relatively high FL anxiety levels cannot be successful in learning that FL. In fact, the effect of anxiety on FL learning is related to a myriad of variables, such as learners' intelligence and personality. Williams (1991) proposed that studies should look at learners' different responses to anxiety. Some students who feel anxious about their FL classes may try to find ways of reducing their anxiety, for instance by doing more extracurricular work to better master the FL, doing more pre-class preparation, or thinking positively about anxiety (Kao & Craigie, 2013). In contrast, others may mentally and behaviorally do little or nothing to become less anxious. Thus, students at the same level of anxiety may differ greatly in their final FL proficiency. Similarly, FL anxiety can create stronger determination in learners and help students to be aware of their weaknesses (Tran, Moni, & Baldauf, 2013). Yet, it does not suggest that FL anxiety is healthy in essence. As for its facilitating effect, this is better understood

from the perspective of creating more motivation in learners (E. K. Horwitz, personal communication, July 06, 2014).

## 6. Conclusion and implications

To conclude, this study has established an association of FL learning outcomes with teacher support as well as student cohesiveness in the classroom, particularly with the latter. Learners' anxiety should ideally be reduced to a minimum, for increased anxiety can bring about more serious consequences to FL learning, as witnessed by a stronger predictive effect of anxiety than of the two classroom variables. The findings lend support to what Gregersen, MacIntyre, and Meza (2014) have noted: "Language learning is an emotionally and psychologically dynamic process that is influenced by a myriad of ever-changing variables and emotional 'vibes' that produce moment-by-moment fluctuations in learners' adaptation" (p. 574). Moreover, this study revealed the interconnections between student cohesiveness, teacher support, and FL anxiety, further suggesting the dynamics of factors influencing FL learning.

The findings of this study have pedagogical implications. First, it remains important that teachers be supportive and sympathetic in respect to students, which has been emphasized by many researchers (e.g., Gregersen, 2003; Horwitz et al., 1986). Second, measures should be taken to build a classroom characterized by closer student-to-student connections. For example, students could be instructed in how to manage conflicts with their peer learners because, as Johnson and Johnson (1995) reflected, "we are not born instinctively knowing how to interact effectively with others. Interpersonal and group skills do not magically appear when they are needed" (p. 122). Third, actions are needed to reduce the interference of FL anxiety with FL learning to a minimum level. For instance, students' enjoyment of FL learning should be established by encouraging students to savour the joyful episodes in the FL classes (cf. Dewaele & MacIntyre, 2014). Positive emotions are beneficial to "dissipate the lingering effects of negative emotional arousal, helping to promote personal resiliency in the face of difficulties" (Dewaele & MacIntyre, 2014, p. 241).

## Acknowledgements

We thank the two anonymous reviewers for their insightful comments on the earlier version of this manuscript. We are grateful for the Graduate School for the Humanities, University of Groningen and China Scholarship Council for their financial support when we were collecting the data and preparing the manuscript. We are also appreciative of the Chinese students and teachers who provided great collaboration during data collection and those who assisted us with materials translation.

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