Foreign Language Learning Anxiety in Japanese EFL University Classes: Physical, Emotional, Expressive, and Verbal Reactions

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This study presents an overview of research devoted to foreign language learning anxiety and then examines in detail the reactions reported by Japanese university students to an anxiety-provoking situations in English-as-a-foreign language (EFL) classes. Questionnaire data was obtained from 243 Japanese learners in conversational English classes at 31 four-year universities in Japan. The following research questions are addressed: (1) What are the physical, emotional, expressive, and verbal reactions to the anxiety-provoking situation? (2) What are the characteristics of anxiety in terms of occurrence, duration, intensity, expectation, and degree of hindrance? (3) What is the relationship between anxiety and pair and small group work? Overall, the findings indicate that some degree of anxiety affected 75% of the learners and that the debilitating aspects of anxiety strongly hindered about 11% of them. Other findings include significant differences between male-female and high-low perceived ability groups on several dependent variables.

Introduction

A growing body of research stretching from the mid-1970s onward indicates that communication anxiety commonly affects many foreign language learners. Because anxiety can hinder performance and achievement, classroom anxiety is a topic deserving of continuing investigation. Early research focused mainly on students studying foreign languages in the United States and Canada, but studies of Asian and other learners have been increasing in recent years. The present study provides a summary of research devoted to foreign language learning anxiety and then examines in detail the physical, emotional, expressive, and verbal reactions of Japanese university students to anxiety-provoking situations in an English-as-a-
foreign language (EFL) classes.

**Literature Review**

Brown (1973), Chastain (1975), and Scovel (1978) were among the earliest researchers to recognize the important and distinct role that anxiety played among the many variables that affect foreign language learning. Foreign language anxiety research during the 1970s, however, was relatively sparse and presented mixed results. During the 1980s, foreign language anxiety research continued to grow (e.g., Bailey, 1983; Horwitz, 1986; Lucas, 1984; Young, 1986), and it was during this period that one study (Horwitz, Horwitz, and Cope, 1986) proposed that foreign language anxiety was distinct from other anxieties. Subsequently, research grew considerably with the publication in 1991 of Horwitz and Young’s *Language Anxiety: From Theory to Research to Classroom Applications* and the work of Aida (1994), MacIntyre and Gardner (e.g., 1991a, 1991b, 1991c, 1994a, 1994b), Phillips (1992), Saito and Samimy (1996), and Williams (1991) among many others. Foreign language anxiety is now generally recognized as an area of study related to but distinct from anxiety studies in general. Reviews of this research can be found in Horwitz (2001) and MacIntyre (1999).

**Types of anxiety**

There are many types of anxiety. Not all of them are particular to foreign language learning, but many of them have been discussed in the foreign language learning literature. These anxieties can be described in different ways and grouped into several categories, which overlap to a certain degree. First of all in general terms is the distinction between *trait anxiety*, which is the tendency of a person to be nervous or feel tension regardless of the particular circumstances, and *state (situational) anxiety*, which is nervousness or tension at a particular moment in response to some outside stimulus (MacIntyre and Gardner, 1989). One type of situational anxiety, for example, is *communication anxiety*, which may occur when people interact verbally (Daly, 1991). Another type is *fear of negative evaluation*, which may be present when people worry about what others think of them (Horwitz, Horwitz, and Cope, 1986).

**Classroom anxiety**

In classrooms, a number of other anxieties may be observed. Learners may feel
cognitive tension when their expectations about the content and organization of a course are not met, and affective tension when there is unsatisfactory interaction with other learners or the instructor (Spielmann and Radnofsky, 2001). Other classroom anxieties are test anxiety, which is fear of poor performance on tests (Horwitz, Horwitz, and Cope, 1986), and specific subject or task anxieties such as the nervousness and tension associated with grammar, listening, public speaking, reading, and writing (e.g., Arnold, 2000; Cheng, Horwitz, and Schallert, 1999; Matsuda and Gobel, 2001; Oh, 1992; Saito, Horwitz, and Garza, 1999; Sellers, 2000; VanPatten and Glass, 1999; Vogely, 1998; Young 1990).

Causes of foreign language learning anxiety

The causes of foreign language learning anxiety have been a major focus of research. One area of research has examined situational variables, for example, course activities, course level, course organization, and instructor behavior (Jackson, 2002; Oh, 1992; Oxford, 1999a; Powell, 1991; Samimy, 1989; Spielmann and Radnofsky, 2001; Young, 1991). Another area of research has investigated learner variables such as ability, age, beliefs, gender, learning styles, and personality factors among others (e.g., Bailey, Daley, and Onwuegbuzie, 1999; Brown, Robson, and Rosenkjar, 1996; Campbell, 1999; Dewaele, 2002; Ehrman and Oxford, 1995; Gardner, Day, and MacIntyre, 1992; Gardner, Smythe, and Brunet, 1977; Gregersen and Horwitz, 2002; Oxford, 1999b). In contrast, some researchers have argued that it is not anxiety or other affective factors that are the problem, but rather it is the native language ability and language learning aptitude of the learner that need to be considered (e.g., Sparks and Ganschow, 1991; Ganschow Javorsky, Sparks, Skinner, Anderson, and Patton, 1994).

Characteristics of foreign language learning anxiety

Although anxiety can be observed in both foreign language and other classes, the research suggests that there are particular characteristics of formal foreign language learning that hold the potential for provoking anxiety in learners who in other learning situations would not experience it. For example, formal foreign language anxiety has been attributed to the inability to present one’s ideas and opinions as well as one can in the target language, which can undermine self-esteem and threaten one’s self-image (e.g., Horwitz, Horwitz, and Cope, 1986). In addition, the inability to pronounce words correctly or use correct grammar can lead to negative evaluation...
by others, and the inability to comprehend spoken and written input, including instructions, can lead to confusion and embarrassment about how to respond or act. These types of anxiety contribute to making formal foreign language learning a particular at-risk experience for many learners (Horwitz and Young, 1991; Horwitz, 2001; Young, 1999).

**Effects of foreign language learning anxiety**

Foreign language learning anxiety has been associated with a large number of negative outcomes that can be classified as physical, psychological, or social (e.g., Bailey, Daley, Onwuegbuzie, 1999; Oxford 1999a). Physical symptoms can include, for example, rapid heartbeat, muscle tension, dry mouth, and excessive perspiration. Psychological symptoms can include embarrassment, feelings of helplessness, fear, going blank, and poor memory recall and retention among others. Negative social behavior may be manifested in such ways as inappropriate silence, unwillingness to participate, absenteeism, and withdrawal from the course. These effects can lead to poor performance and low achievement. Research suggests that for many learners, success and perseverance in foreign language learning to a large extent depends both on the teacher’s ability to minimize the debilitating effects of classroom anxiety and the learners’ ability to cope with the anxiety that cannot be prevented or avoided (e.g., Young, 1999).

In contrast to this debilitating anxiety, there is indication that a certain degree of anxiety may be beneficial to some learners (Scovel, 1978). Usually referred to as facilitative anxiety, it has been credited with motivating learners to study harder and make stronger efforts to perform better on classroom tasks. There remains, however, disagreement as to whether this emotional state is really anxiety, and terms such as attention, alertness, or arousal may be more accurate. Although some research has found in a few cases that high anxiety is associated with positive outcomes mainly high tests scores (e.g., Brown, Robson, and Rosenkjar, 1994) the predominance of the evidence supports the debilitating effect, especially for speaking activities. Williams (2008), however, has questioned the validity of the initial research by Yerkes and Dobson, done in 1908, upon which the assumptions of facilitative anxiety are based.

**Studies of Asian Learners**

Since the early 2000s, there have been a growing number of studies of Japanese and other Asian learners. Jackson (2002) in an ethnographic study of 168 Chinese
students in English-medium business classes at a university in Hong Kong found that a combination of anxiety, cultural, and personal factors contributed to the lack of participation in discussions. In a study of 272 first-and second-year Japanese university students in Japan, Caprio (1987) found negative reactions to being called on in class and speaking English. Females reacted more negatively than males to calls for class participation, perhaps attributable to cultural factors in conjunction with their minority status in the groups studied. Hashimoto’s (2002) study of 56 Japanese students at a university in the United States found that anxiety exerted a strong influence on perceived competence and negatively affected their willingness to communicate.

There have been several other studies of Japanese learners and classroom anxiety. Tajima (2002) found in a study of 84 Japanese university students that differences in anxiety levels between English majors and non-majors, and students whose previous experiences included having native-speaking friends, traveling abroad, and passing standardized achievement tests. Anxiety was mainly related fear of negative evaluation while speaking in front of others. The results of Yamashiro and McLaughlin’s (2001) study of 220 Japanese junior college and university students suggested that higher levels of anxiety tend to indicate lower levels of proficiency. The data also suggested that a higher level of motivation might lead to a higher level of anxiety, which in turn may lead to a lower level of proficiency. Kondo and Yang (2003) found in their study of 148 university students in Japan that classroom anxiety was associated with three main factors: low proficiency, fear of negative evaluation by classmates, and speaking activities. In a study of first-year Japanese junior high school students (n =148), Takada (2003) found that anxiety levels and motivation were unrelated to previous English language study in elementary school. Burden (2004) replicated the study of Horwitz, Horwitz, and Cope (1991) and found that about half of the Japanese students (n = 289) in the university conversation classes he studied suffered from some level of anxiety. In contrast to other studies of Japanese learners, Brown, Robson, and Rosenkjar (2001) found that Japanese university students (n = 320) who had higher scores on a cloze test tended to have high anxiety scores on the FLCAS (Horwitz, Horwitz, and Cope, 1986).

**Cross-Cultural Comparisons**

Related research in the area of Japanese-American cross-cultural psychology has found that culturally based differences of the definition and interpretation of
emotions can be identified. In one study of interest (Imada, 1989), the purpose was to define the Japanese equivalents of anxiety (fu-an), fear (kyo-fu), and depression (yu-utsu). Imada found that Americans students referred directly to physical senses as experiences of anxiety, but this tendency was weaker among the Japanese students. Another finding was that when asked to write about specific anxiety situations they had experienced, American university students tended to link the experience of anxiety with not being able to attain the goals they were actively pursuing in contrast to Japanese students who often perceived the experience of fu-an (anxiety) as being “an uneasy expectancy of losing peace and comfort they have already attained” (p. 16). The Japanese students judged the Japanese experience of fu-an as being, among other things, weaker, ambiguous, and more inactive in contrast to the American students’ experience of anxiety as being stronger, more active, and more focused.

In a study of communication apprehension, Ishii, Cambra, and Klopf (1978) compared anxiety levels of Japanese and American college students. Seven hundred Japanese students and 727 University of Hawaii students were given the Personal Report of Communication Apprehension for College Students (PRCA-College) in their native language. The results indicated that Japanese scored higher than average on 75% of the PRCA-College items, suggesting perhaps that the Japanese students viewed themselves as significantly more apprehensive than confident. When compared with the American students, the Japanese students were more apprehensive.

In a cross-cultural study of university students, Matsumoto, Kudoh, Scherer, and Wallbott (1988) used seven separate questionnaires with closed-ended alternatives as a way to evaluate the emotional responses of joy, fear, anger, sadness, disgust, shame, and guilt between Japanese and Americans. Specifically, the goal of this study was to evaluate four aspects of the emotional process: “(1) the ecology of emotional experience; (2) the regulation and control of emotion; (3) the subjective evaluation of emotion-eliciting events; and (4) the verbal, nonverbal, and physiological reactions” (p. 271). Culture was used as a between-subjects factor and emotion as a within-subject factor. Their results are very rich and not all of them will be presented here. However, a number do stand out and should be considered significant. The American subjects reported experiencing emotions more intensely and for a longer period of time than the Japanese subjects. They also tended to attribute the cause of the event to other people, whereas the Japanese subjects tended to attribute it to chance or life. There were noteworthy differences in the cultures response to fear (anxiety), anger, disgust shame, and guilt. Most significant was more Japanese than Americans believed
that in the situations mentioned no action was necessary. Matsumoto et al. (1988) hypothesize that “this finding is consistent with the findings about attribution of responsibility for the event: if one is reluctant to make an attribution of responsibility, or attributes responsibility to other forces, then one’s coping ability is limited, and is reflected in the belief that no action is necessary” (p. 279).

Research Questions

The aim of the present study is not to replicate the study of Matsumoto et al. (1988) but to contribute new information on foreign language learning anxiety in Japanese learners by applying a modified version of their questionnaire to the EFL classroom. Specifically, the present study examines the following questions: (1) What is the relationship between anxiety and pair and small group work? (2) What are the characteristics of anxiety in terms of occurrence, duration, intensity, expectation, and degree of hindrance? (3) What are the physical, emotional, expressive, and verbal reactions to the anxiety-provoking situation?

Method

Participants

The participants in this study were non-English majors students at six universities in Japan enrolled in first- and second-year conversational English courses taught by native speakers of English. Class sizes ranged from 20 to 30 students. Ages of the students ranged from 18 to 21. There were 132 males and 111 females.

Questionnaire

The questionnaire used in this project was adapted for the Japanese foreign language learning context from the one Matsumoto et al. (1988) used to compare differences in emotional responses between Japanese and Americans. The first adaptation, written in English, was reviewed by several knowledgeable colleagues for evaluation of its overall structure and to see if the individual questions fit the desired goals for each section and the instrument as a whole. After this review, the questionnaire was revised and reviewed a second time as above. Revisions were again

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1. This pool of participants was the same as the one used in Williams and Andrade, 2008.
made. Next, the questionnaire was translated into Japanese, and colleagues who were native Japanese speakers undertook the same review. Further revisions were made. The final version consisted of 12 items in the form of Likert scales and multiple-choice questions.

The Japanese version of the questionnaire was piloted on a target group of 50 first- and second-year university students in conversational English classes in Japan. In addition, randomly selected students were asked to give their views on the questionnaire regarding any difficulty in understanding instructions or other sections that were unclear or ambiguous. Revisions were made from this feedback. The final version was back translated to check for accuracy. The English version of the questionnaire items appears in the Appendix.

Procedure

The questionnaire was administered in 31 classes during class time midway through the first semester by six instructors. The students were informed that the survey would gather information about how they felt concerning various activities in their conversational English language class and would have no effect on their grade. They were asked to read each statement carefully and reflect on their experience before marking their response. The questionnaire was anonymous and did not reveal any information that could be used to identify individual students.

Data Analysis

From any initial pool of 780 questionnaires, one-third (260) of the original total were randomly selected for processing. After incomplete questionnaires were eliminated, 243 remained for analysis. Based on gender and the students’ self-perceived ability level, the questionnaire data was divided into nine groups for analysis: (1) all students, (2) males only, (3) females only, (4) high ability, (5) low ability, (6) high males, (7) high females, (8) low males, and (9) low females. High ability students were considered to be those who rated themselves as above average in English ability (marking ranks 6-8 on the scale), and low English ability students were those who rate themselves as below average (marking ranks 1-3 on the scale). These ratings indicated the participants perceived ability level not their actual level. Objective measures of learner ability were not available to us. The descriptive statistics for the nine groups for the variables of pair (PRW) and
group work (GRW), occurrence (OCC), duration (DUR), intensity (INT), expectation (EXP), hindrance (HIN), and perceived ability (ABL) appear in Tables 1, 2, and 3. MANOVA and post hoc Scheffé tests were performed to determine any significant differences between the groups that could be attributed to perceived ability or gender. Significant differences among the groups appear in Table 4. Pearson product-moment correlations were calculated to find the degree of relationships between perceived ability and gender on the following variables: pair work, group work, occurrence, duration, intensity, expectation, and degree of hindrance. Descriptive statistics for physical, emotional, expressive, and verbal reactions appear in Table 5.

Results

Perceived ability level and gender

The results for the participants as a whole appear in Table 1, and the breakdown by gender and perceived ability level appears in Tables 2, 3, and 4. The lowest group (rankings 1-3) and the highest group (rankings 6-8) accounted for 60.91% and 8.23% respectively (1=poor, 8=excellent). Among the male students, 9.09% ranked themselves as high ability (rankings 6-8) and 65.91% as low ability (rankings 1-3). Among the female students, 7.21% ranked themselves as high and 54.95% ranked themselves as low. There were no significant differences between males and females in their perceived ability levels.

Previous research suggests that higher ability learners tend to underestimate their ability and lower ability learners tend to overestimate it (MacIntyre, Noels, and Clement, 1997). On the other hand, other studies have found that low perceived ability is associated with low achievement (e.g., Bailey, Onwuegbuzie, Daly, 2000; Kitano, 2001). If perceived ability does, indeed, work in these ways, then the overall actual ability level of students in this study may be higher than the data suggest. How perceived ability and gender are related to the other variables in this study is discussed below.

Pair and group work

Pair and small group work are believed to contribute to a low-anxiety classroom situation (e.g., Koch and Terrell, 1991; Price, 1999; Young, 1999). These two items asked to what extent the students participated actively when engaged in these activities. There were significant differences for nearly all
groups (Table 4), with females and lower ability students actively participating more in pairs or small groups than in a whole class situation. Same-gender comparisons, however, showed that high females participated more than low females. The difference between high males and high females was not significant, although the high females participated more. A strong correlation ($r = .76$) was found between pair and group work, suggesting that teachers who use these activities tend to use both in their classes. No correlations were found, however, between pair or small group work and the variables hindering, intensity, and duration of anxiety. The anxiety-provoking situations that the students described may or may not have occurred during these activities.

**Occurrence of the situation**

Reports of when the anxiety-provoking situation occurred varied widely. Only 18.52% reported a recent occurrence (a few days ago) or weeks ago (32.10%) in contrast to nearly half of the students (49.38%) who reported an incident happening months or years ago. There were no significant differences attributable to gender or perceived ability among the groups and no Pearson correlations exceeding $r > .30$ or $r < -.30$ between occurrence and the other variables, suggesting that these items were not strongly related. These findings are difficult to interpret because we do not know why the students reported the particular situation that they did. It could be the case that the students chose the strongest anxiety-provoking situation in their experience, or perhaps they chose one that was the easiest to recall. If hindering anxiety were a major factor in the classroom environment of a majority of these students, we suspect there would be more reports of recent anxiety-provoking situations. Nevertheless, with half of the students reporting cases that occurred within a few weeks or days of the study, it is clear that classroom anxiety is still a problem.

**Duration and intensity**

For 80.25% of the students, the anxiety lasted only a few minutes, and anxiety that lasted for several hours or more than one day affected only 7% of the students. There were no significant differences in duration among any of the groups. A weak to low-moderate intensity of anxiety (rankings 1-4) was reported by 59.26% of the students in contrast to 40.74% who reported a high-moderate to high intensity (rankings 5-8 in Table 2). About 8% of the students (rankings 7-8) were strongly affected, and 9% of the students reported no anxiety. These data suggest that a
negative emotional impact was not a problem for many of the students, but was potentially a serious problem for some. For females, the experience was slightly more intense than for males in general \((p < .001)\). Specifically, low females reported more intense anxiety than low males \((p < .05)\). These results contrast with those of Campbell (1999), who found the males in her study to be more anxious, and they are similar to those of Caprio (1986) and Pappamihiel (2001).

**Expectation**

About half of the students (49.79%) expected an anxiety-provoking situation (rankings 5-8 in Table 2). We conjecture that based on their previous experiences in foreign language learning, many students may be coming to the classroom mentally prepared to experience some type of anxiety. This expectation may explain to some degree why the majority of students do not feel an intense, persistent, hindering anxiety that affects a small minority. There were no significant differences attributable to gender or perceived ability except for low females, who were more likely to expect anxiety than low males \((p < .05)\). There were no correlations between expectation and the other variables.

**Hindrance**

About 25% of the students indicated that anxiety hindered their English learning (rankings 5-8 in Table 2), and a high degree of hindering affected 11% of the students (rankings 6-8). There were significant differences between the high and low ability groups in general \((p < .05)\) and between the high and low females specifically \((p < .05)\). The difference between low males and low females was also significant at \(p < .05\). Those students with higher perceived ability were less hindered than those with lower perceived ability, a finding consistent with the results of other studies (e.g., Horwitz, Horwitz, and Cope, 1986).

**Physical and emotional reactions**

The most common physical reactions (Table 5) were faster heartbeat (67.49%), feeling hot or burning cheeks (51.85%), perspiring (34.57%), and a lump in the throat (23.05%). The most common emotional reactions were having the mind go blank (42.35%) and inability to concentrate (27.05%). It is easy to see how these emotional reactions could relate to many of the anxiety-provoking situations reported in Williams and Andrade (2008), for example, remaining silent and not responding.
quickly.

**Expressive and verbal reactions**

Anxiety associated with verbal and expressive reactions (output and mental planning rather than input) combined with fear of negative evaluation and loss of self-esteem accounted for the majority of the anxiety-provoking situations (Williams and Andrade, 2008). The most common expressive reactions cited (Table 5) were smiling or laughing (29.22%) and changes in the voice (23.05%). The open-ended category of “other reactions” (23.05%) included comments about using broken English, simplifying what one wanted to say and sounding childish, and making grammatical and pronunciation mistakes. We speculate that smiling to mask one’s true feelings is a characteristic of Japanese non-verbal communication (the so-called “Japanese smile”) and that accordingly such behavior would be an expected response to intense classroom anxiety in Japan. Concerning verbal reactions, speech disturbances (hesitation, mispronunciation, etc.) accounted for 59.26% of the verbal reactions, followed by speaking in short phrases (47.74%), shortening one’s comments to one or two sentences (34.57%), and silence (24.69%). In an oral performance course, such behavior would likely contribute to a lower final grade.

**Conclusion**

Overall, about 75% of the students in this study were weakly to strongly affected by anxiety to some degree. The debilitating effects did not last long for the majority but did strongly hinder about 11%. Other findings include significant differences between male-female and high-low perceived ability groups on a number of variables, especially between the low-males and low-females. The physical, emotional, expressive, and verbal symptoms of anxiety were similar to those reported in studies of non-Japanese students. One finding to bear in mind is that many students enter their university EFL classes expecting to experience an anxiety-provoking situation and that anxiety is likely to significantly hinder the performance of some students. Foreign language learning anxiety is not something to be ignored or considered a problem for the students to deal with on their own. To optimize learning for all learners, teachers should be aware of anxiety-provoking situations and take steps to minimize their negative impact. In addition, learners would benefit from being taught how to cope with these situations in a positive way. To this end, approaches
recommended in Young (1999), Campbell and Ortiz (1991), Crookall and Reitzel (1991), Foss and Reitzel (1988), McCoy (1979), and Vande Berge (1993) may be good places to start, and further research on the actual effectiveness of these approaches in a diversity of classroom settings would make a positive contribution to foreign language learning anxiety research.

One limitation of this study was that the students rated themselves after the anxiety situation, not before. Their self-ratings may reflect their experiences in the course, not the attitude they began the course with. Those who experienced strong anxiety may have rated themselves lower because of that anxiety. Thus, we cannot show that their perceived ability level had a causal role in their experience of anxiety. In fact, it may have been a result of those anxiety situations.

References


Tajima, M. (2002). Motivation, attitude, and anxieties toward learning English as a


**Appendix**

**Questionnaire Items**

1. During this English course, how often did you actively practice English in pairs with another student?
   - Never 1 2 3 4 5 6 7 8 Always

2. During this English course, how often did you actively practice English in a small group with other students?
   - Never 1 2 3 4 5 6 7 8 Always

3. When did an anxiety-provoking event happen to you in an English class?

4. How long did you feel this anxiety?
   - 1. A few minutes  2. An hour  3. Several hours  4. One day or more

5. How intense was this anxiety?
   - Not intense 1 2 3 4 5 6 7 8 Very intense

6. Think back to the situation that caused your anxiety. Did you expect this situation to occur?
   - Not at all 1 2 3 4 5 6 7 8 Very much

7. Did this anxiety hinder or help your English learning?
   - It helped 1 2 3 4 5 6 7 8 It hindered.

8. How would you evaluate your English ability at the time this event happened?
   - Poor 1 2 3 4 5 6 7 8 Excellent
Below is a list of reactions that often occur in anxiety-provoking situations. Check the ones you experienced during the event above.

9. Bodily reactions
   1. ____ Lump in throat
   2. ____ Change in breathing
   3. ____ Stomach troubles
   4. ____ Feeling cold, shivering
   5. ____ Feeling warm, pleasant
   6. ____ Feeling hot, cheeks burning
   7. ____ Heart beating faster
   8. ____ Muscles tensing, trembling
   9. ____ Muscles relaxing, restful
  10. ____ Perspiring
  11. ____ Other symptoms
  12. ____ Do not remember

10. Emotional reactions
   1. ____ Mind went blank
   2. ____ Had many unwanted thoughts
   3. ____ Could not concentrate
   4. ____ Other emotional reaction
   5. ____ Do not remember

11. Expressive reactions
   1. ____ Laughing, smiling
   2. ____ Crying, sobbing
   3. ____ Other changes in facial expression
   4. ____ Screaming, yelling
   5. ____ Other changes in voice
   6. ____ Changes in gesturing
   7. ____ Abrupt bodily movements
   8. ____ Moving towards people or things
   9. ____ Withdrawing from people or things
  10. ____ Moving against people or things aggressively
  11. ____ Other expressive reactions
  12. ____ Do not remember

12. Verbal reactions in English
   1. ____ Silence
   2. ____ Short utterances
   3. ____ One or two sentences
   4. ____ Lengthy
   5. ____ Speech-melody change
   6. ____ Speech disturbances
   7. ____ Speech tempo changes
   8. ____ Other verbal reactions
   9. ____ Do not remember
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1. Top figures are frequency and bottom figures are percentages (rounded).
2. PRW = pair work (item 1), GRW = group work (item 2), OCC = occurrence (item 3), DUR = duration (item 4), INT = intensity (item 5), EXP = expectation (item 6), HIN = hindrance (item 7), ABL = perceived ability level (item 8)
Table 2. Means and standard deviations for the questionnaire items

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Note: HA = high perceived ability, LA = low perceived ability, HM = high males, HF = high female, LM = low male, LF = low female
Table 3. Results of MANOVA for six groupings of gender and ability

<table>
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<tr>
<th>Comparison</th>
<th>Wilk’s lambda</th>
<th>Rao’s R</th>
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<th>df 2</th>
<th>p-level</th>
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<td>159</td>
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*Note: Calculated using Statistic Release 4.0 software.*

Table 4. Significant differences between groups on questionnaire items

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<th>H-L</th>
<th>M-F</th>
<th>HM-LM</th>
<th>HF-LF</th>
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<td>***</td>
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*Note: M = male, F = female, H = high perceived ability, L = low perceived ability
* p < .05 level  ** p < .01  *** p < .001 level  (Scheffé test)
Table 5. Physical and psychological reactions to classroom anxiety

<table>
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<th>Sub-item (Item 9)</th>
<th>Body (Item 10)</th>
<th>Emotional Expression (Item 11)</th>
<th>Verbal (Item 12)</th>
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Notes: (1) See Appendix for sub-item referents. (2) Respondents could choose multiple items in each category. (3) The top figure is the frequency, and the bottom figure is the percentage of respondents out of 243 who chose this item.