

## Test Anxiety in Japanese-Language Class Oral Examinations

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Key words: **language anxiety, test anxiety, motivation / attitudes, foreign-language classroom anxiety, state anxiety**

The current research investigates situation specific oral examination anxiety in a foreign-language learning situation and how a particular type of language anxiety — anxiety in oral communication — impacts on learners' oral performance. The subjects are first-year Japanese-language course students at tertiary level in Australia. Questionnaire surveys were conducted to obtain: a) the learners' background and motivation, b) their anxiety in foreign-language classes, c) their anxiety toward oral examinations, and d) the anxiety they actually felt in an oral examination. The objectives of the study are to investigate relationships 1) between these learner affective factors and the scores of the oral examinations and 2) among these affective factors in the oral examinations. The results indicated that state anxiety felt in the examination had a significant negative correlation to the learners' examination results, and furthermore state anxiety can be a strong predictor of learners' performance in an examination. Examinations of subgroups according to gender, nationality, first language, prior foreign-language experience, and oral examination scores revealed that anxiety affected performance in the oral examination in combination with motivation levels.

### INTRODUCTION

This study investigates a situation specific anxiety, *oral examination anxiety* in a foreign-language class. Some learners are very apprehensive about their performance in foreign-language classes, whereas some are confident and rarely anxious. The state, *being anxious*, can influence a person in both positive and negative ways. This study examines and measures how situation specific anxiety affected performance in oral examinations by learners of Japanese at the introductory level. The

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situation specific anxiety under investigation can be a combination of *test anxiety*, *language anxiety*, *communication apprehension*, and *anxiety in a foreign-language class*.

*Test anxiety* is seen as a situation specific personality trait that can result from repetitive experience of state anxiety in different test situations (Spielberger and Vagg 1995). Individuals with high test anxiety are more likely to experience state anxiety in test situations compared with those with low test anxiety. Test anxiety involves worry and emotionality as its major components. Anxiety level and performance have been hypothesized to have an inverted-U relation, rooted in the Yerkes-Dodson theory of motivation and performance (Anderson and Sauser 1995). That is, anxiety can facilitate performance until the level of anxiety goes beyond a certain level, after which excess anxiety will debilitate performance.

Many studies have provided evidence that test anxiety is inversely related to performance in a wide variety of evaluational situations (e.g., Sarason 1986). The results from ability or achievement tests and anxiety measures usually show negative correlations when there is sufficient variation in the ability and achievement test scores (Hembree 1988). Increasing the complexity of the task appears to raise the level of anxiety in individuals prone to test anxiety (Sarason 1972a, 1972b, 1975). However, the effects become less significant when the tasks are less intricate or less demanding.

Another type of anxiety involved in this study is *language anxiety*. Like test anxiety, language anxiety is presumed to have developed from negative experiences in the past. Tobias's model (1977, 1979, 1986) attempts to describe the effects of anxiety on learning by instruction. It divides learning by instruction into three phases: input, processing, and output. It is hypothesized that anxiety, an affective state, can have a large effect when input becomes intake, during intake processing for storage, and just before responding as output. In the last phase anxiety can interfere with retrieval of previously learned content from memory for test performance. The potential effects of anxiety in the last phase can be seen on the efficiency and effectiveness of the process of retrieval (Eysenck 1979). Anxiety can reduce both the efficiency and effectiveness of cognitive processing. When students became very anxious, the anxiety interferes with cognitive processes and debilitates their performance on occasions such as a test. For example, a similar performance in an oral examination can result from the quick preparation by a less anxious student or prolonged rehearsals by a highly anxious student. Students who have constantly and diligently prepared can yet freeze up during the test (Tobias 1979).

*Communication apprehension* is defined as "the fear or anxiety an individual feels about orally communicating" (Daly 1991: 3). It can be displayed as public-speaking anxiety or stage fright. Possible explanations are genetic predisposition, a history of negative reactions received from other people, learned helplessness from negative communication, inadequate development of communication skills in early childhood, and lack of adequate models of communication (Daly 1991).

Horwitz et al. (1986) divide foreign-language anxiety into three subcomponents: *communication apprehension*, *test anxiety*, and *fear of negative evaluation*. MacIntyre and Gardner (1989) found that language anxiety is different from general anxiety

and is more likely part of communication apprehension, and that *state anxiety*, which is part of *general anxiety*, is not related to language behavior in such a reliable manner as has been considered in some investigations (e.g., Young 1986). Their analysis demonstrated that *state anxiety* is “more likely to be a product” and mostly related to previous test performance rather than upcoming performance. They proposed a causality model — “foreign language anxiety (communicative anxiety) causes poor performance (and learning) in the foreign language which produces elevations in state anxiety” (MacIntyre and Gardner 1989: 271). They also demonstrated a concurrent deficit in language acquisition (vocabulary learning) caused by anxiety arousal among their subjects (1994).

This study investigates oral test anxiety in a Japanese foreign-language class. The purpose of the current study is first to examine whether or not there is a correlation between learners’ perceived anxiety and their performance in the oral examinations. Second, it explores what roles learner variables such as gender, language background, etc. played in the oral examinations in combination with their anxiety and motivation.

The study is designed to explore the role of anxiety in this particularly anxiety-raising situation, i.e., a test situation in which the tests were also part of the course assessment (i.e., very much an evaluative situation). The tests require the subjects to communicate face-to-face in a foreign-language with a native speaker in a small room. Therefore, it is likely that the situation will introduce communication apprehension among many subjects. The hypothesis generated from the previous studies is that anxiety is perceived by the subjects to have a negative effect on their performance in oral examinations (e.g., Horwitz et al. 1986; MacIntyre and Gardner 1989, 1991b, 1994). For the investigation, questionnaire surveys were conducted and the results of oral examinations were gathered. The surveys collected data on the subjects’ backgrounds, motivation and attitudes toward Japanese learning, and their situation specific trait and state anxiety in foreign-language classes.

## METHOD

### 1 The Subjects, Data Collection

The subjects were 166 students of a Japanese-language course at first-year tertiary level in Australia, with subgroups of different ethnic backgrounds. Although the course is designed for beginners, some had previous experience with Japanese. The first of the two types of information gathered about subjects was: a) personal language background, b) motivation, c) foreign-language classroom anxiety, and d) oral test anxiety. The second type was the actual data of their oral examination: results of their performance and their responses to the questionnaires about the examinations.

For the first type of data collection, three questionnaire surveys were conducted. Questionnaire 1, consisted of Part A and Parts B-1 and B-2. Part A contained questions about the subjects’ language backgrounds, and the questions in Parts B-1 and B-2 were taken from the Attitude and Motivation Test Battery (Gardner

1985). Part B-1 contained 42 questions regarding interest in foreign-languages, attitudes toward Japanese people, attitudes toward learning Japanese, orientation, and parental environment, arranged in random order using seven-point Likert scales. Part B-2 included 20 multiple-choice questions regarding desire to learn Japanese, motivational intensity and orientation. The three choices provided for each question corresponded to strong, fair, and weak in the degree of intensity and were arranged in random order for each question. Questionnaire 2 consisted of 33 questions taken from the Foreign-Language Class Anxiety Scale (Horwitz 1983) and asked about anxiety both in general and specific to Japanese-language in the foreign-language classroom using seven-point Likert scales. Questionnaire 3 consisted of 31 questions regarding anxiety in oral examinations in general (Test Anxiety Scale: Sarason 1978).

The second type of data collection included two short questionnaires and the assessment of performance in four oral examinations. The performance was assessed by two examiners and videotaped for reference. The first of the two short questionnaires involved questions regarding the actual oral test performance. It asked the subjects for their reflections on the actual oral performance they had just finished (roleplay and Q & A in Oral Examination 2). The other short questionnaire contained two sections: section one was filled out before, and section two, after, Oral Examination 3. The questions before the examination included anxometer (anxiety scale) (MacIntyre and Gardner 1991a) and seven questions directly related to the following oral examination (in Likert scale). The section completed after the examination included anxometer again and Japanese (French) Class Anxiety (AMTB).<sup>1</sup>

## 2 Procedure

The data was collected in the following manner. At the beginning of the course the research objectives were explained to the subjects who were asked to cooperate. Four weeks after the course started, the subjects were asked to fill in Questionnaire 1, providing their personal background related to foreign-language learning (Part A) and answering questions from AMTB (Parts B-1 and B-2). Two weeks after the first questionnaire, the subjects took the first oral examination. Prior to the examination, they practiced roleplay in the classroom, and also received a handout containing information about the procedures, the topics, the assessment criteria, etc. of the examination.

The actual examination was held in a small room, and the subjects' performances were videotaped for reference and feedback purposes. Each subject met with two examiners in the room. The examination took three to seven minutes and the subjects were requested to carry out two roleplays with one of the examiners. Both examiners were asked to give marks from one to ten, considering six criteria: a) coverage of the content of the task, b) appropriateness of the expressions used, c) accuracy of grammar and pronunciation, etc., d) fluency, e) effort to communicate,

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<sup>1</sup> Japanese (French) Class Anxiety was included in Questionnaire 2. However, the collection rate was not high (37%: 58 out of 155). Therefore, it was repeated in the last short questionnaire.

and f) dependence on assistance from the teacher (examiner). The examiner who participated in the role-playing with the subjects provided a holistic mark for the entire performance by each subject, but could not always provide submarks for the six categories, even though these criteria were considered when grading.

After a four-week interval the subjects were given Questionnaire 2 consisting of FLCAS in Week 10. In Week 12 the subjects took the second oral examination. The second oral examination was conducted in a manner similar to the first one. However the test included question-and-answer parts as well as role-playing. Immediately after, the second test subjects were given Questionnaire 3. At the same time, the subjects filled out the first of the two short questionnaires regarding their anxiety in the second oral examination. The third oral examination (roleplay and Q & A as in the second examination) was held in Week 7 in the second semester (after 19 weeks of Japanese learning). The subjects were asked to answer the second of the short questionnaires including anxiety scale (anxometer) and J(F)CA. Part of the questionnaire was filled out just before taking the actual oral examination, and the remainder, immediately after finishing the examination.

## RESULTS

The results of the questionnaire surveys indicated that the subjects possessed various language backgrounds, with many of them from English- and Chinese-speaking countries. Results of the oral examinations appeared to reflect the existence of two distinct groups, i.e., true and false beginners. Analysis of the subjects' oral examination results demonstrated that subjects' familiarity with the target language tested, their effort toward each examination, their state anxiety, etc. all played a role as factors contingent to the examination scores. The analysis of the examination scores and the subject variables measured by the questionnaire surveys further suggested that the *state anxiety* felt in the examination by the learners had a particularly significant negative correlation to their examination results. Analysis within and among gender, nationality, first language, and prior foreign-language experience subgroups, and their oral examination scores revealed that anxiety affected performance in the oral examination in combination with *motivation* levels.

### 1 Language Background of the Subjects (Questionnaire 1: Part A)

Questionnaire 1 was filled out by 106 students; 6 students did not wish to be identified. They are divided into 46 males (44%), 59 females (56%), and 1 unknown. Therefore, it is a very well-balanced language class, considering that female students often dominate language classes. The students are spread over 19 different nationalities: 39 Australians (36.8%: including 2 Taiwanese Australians), 14 Malaysians (13.2%), 12 Taiwanese (11.3%), 9 Hong Kong Chinese (8.5%), 8 Mainland Chinese (7.5%), and others. Therefore, this is very much a multi-ethnic language class having two dominant subgroups: Australian and Chinese subgroups. Seen in Figure 1, 78 subjects (72.9%) had previous experience with languages other than their mother tongues, such as English (19: 17.8%), Japanese

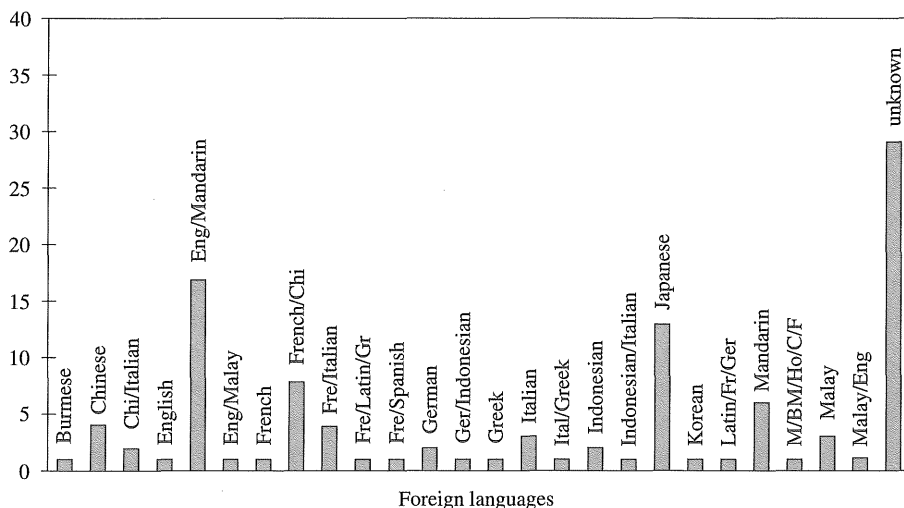


Figure 1 Previous Experience with Foreign-Languages (n = 78)

(13: 12.1%), etc.

## 2 Results of Oral Examinations

Figures 2–5 indicate the results of the four oral examinations and the spread of the scores. The scores were given by two examiners for each examinee (subject). Interrater reliability was 0.999 (4 raters), 0.998 (5 raters), 0.9191 (4 raters), and 0.9933 (4 raters), respectively for Oral Examinations 1, 2, 3, and 4. The results of the four oral examinations were skewed as seen in Figures 2–5. The average scores for the first two (in the first semester) were 6.55 and 6.5, and the second two (second semester) were 6.69 and 6.66 out of 10.

The results of Oral Examination 2 were bimodal and had two peaks: Mode = 7.25; and bars (5.5–6) around the mean (6.5) (see Figure 3). The bimodal results can be explained by the characteristics of the subjects' demography and the nature of Japanese learning in the classroom. The subjects were in a beginners' Japanese course at a tertiary institute. Every effort had been made to distinguish false beginners from true beginners. However, there are always false beginners in a beginners' course, since 1) some students falsify their Japanese proficiency because they want to take the course as an easy subject, and 2) other students fall between beginners' and post-beginners' levels.

In addition, examinations given for the course are achievement tests rather than proficiency tests. Therefore, test-taking skills as well as familiarity with the test count more toward the results of the examinations than in proficiency tests. Consequently, the results the students obtain from the examinations are combinations of their proficiency, how much effort or study they have put into the particular items

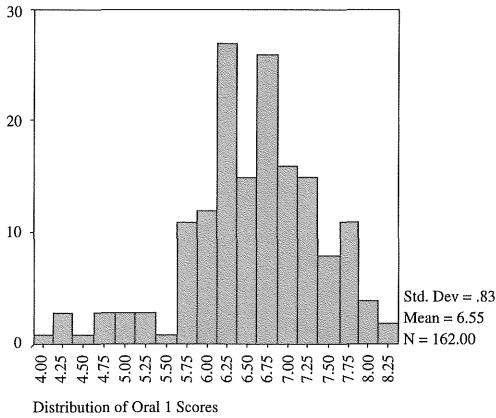


Figure 2 Oral Examination One

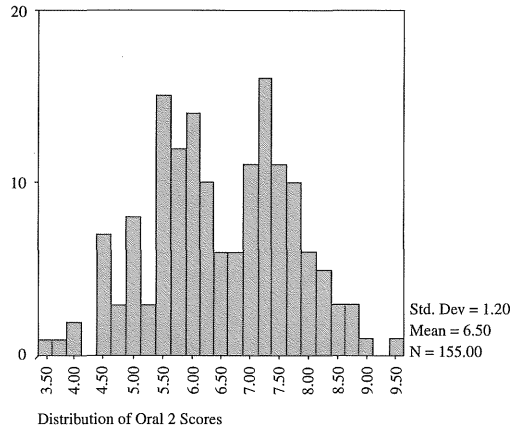


Figure 3 Oral Examination Two

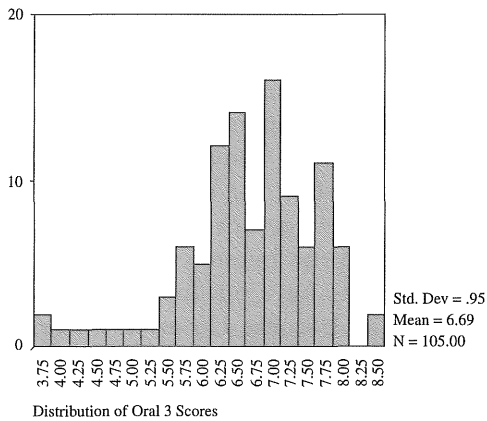


Figure 4 Oral Examination Three

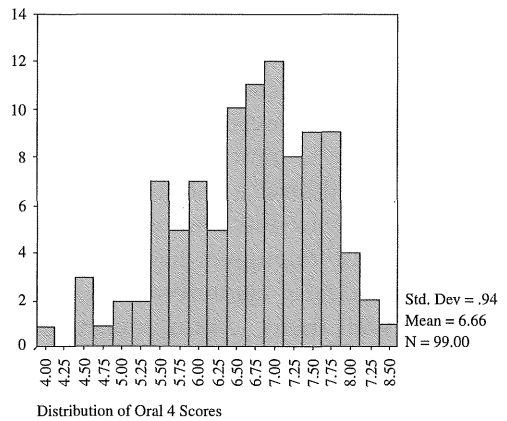


Figure 5 Oral Examination Four

to be tested in each examination, and how familiar they are with the test formats and procedures. For the first oral examination, the subjects' unfamiliarity with the test and a fairly easy target language level seem to have contributed to containing the spread of test results. However, individual differences in Japanese proficiency and a more demanding target language level in the second examination appear to spread the scores more and the results seemingly reflected the existence of the two subgroups (true and false beginners).

The results of the third examination were mostly skewed toward the higher end (Figure 4). Its overall distribution resembles the first examination. That can be explained by changes in the subjects' demography. Between the semesters, most of the subjects did not study Japanese (over a month), a number of students stopped

Table 1 Oral Examinations

Oral 1	Co/Coeff N	Oral 1	Oral 2	Oral 3	Oral 4
Oral 2	Co/Coeff N	.425*** 145			
Oral 3	Co/Coeff N	.456*** 91	.485*** 91		
Oral 4	Co/Coeff N	.488*** 86	.369*** 86	.607*** 95	
Average Orals	Co/Coeff N	.738*** 149	.834*** 146	.824*** 101	.806*** 95

NB \*\*\*indicates  $p < .001$ .

coming to the course for various reasons,<sup>2</sup> and some new students joined the course. This created a similar situation to the first examination.

The results of the fourth examination did not display 'bimodality,' as shown in the results for the second examination (Figure 5). Less devoted students tend to drop out of the course more than motivated ones. Consequently, their withdrawal from the course elevated the standard (median) level of Japanese in combination with an intake of new students who had learned Japanese previously. Another possible contributor is the level of target language tested at the examination. By the end of the second semester, the level of target language normally exceeds the levels the false beginners had achieved previously. True beginners who clearly witnessed the false beginners early in the course tend to have put in more effort to catch up with them. As a consequence, the results become closer to a normal distribution than those of the second oral examination.

The following correlations (Table 1) were observed among the four examination results. First of all, the scores for the four oral examinations are related significantly at moderate rates ( $\rho$  (rho) = .425\*\*\* to .607\*\*\*). However, as expected, they correlated to the average scores more strongly (even considering part and whole overlap-see Table 1). This suggests that the oral examinations studied were very much affected by situational variables, such as how much effort the subjects put into each examination, their familiarity with the target expressions tested at each examination, etc.

### 3 Results of Questionnaire Surveys

#### 3.1 Score Distribution of Variables

All answers to the questionnaires were adjusted so that 1 indicates the weakest and

<sup>2</sup> Some students graduated from the university. Some took Japanese to fill a credit point gap for only one semester. Some thought the workload was too much and discontinued. Others did not perform well and did not come back to the course in the second semester.



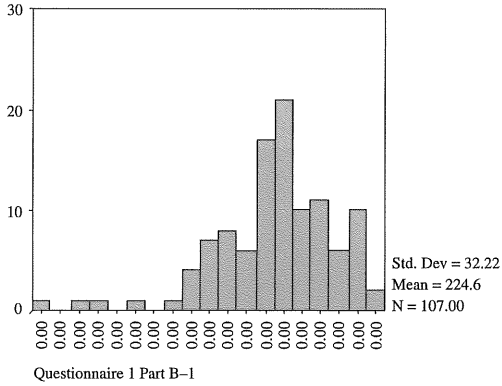


Figure 6 Distribution of AMTB (Part B-1) Scores

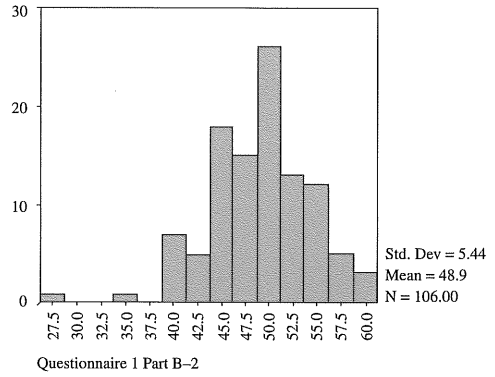


Figure 7 Distribution of AMTB (Part B-2) Scores

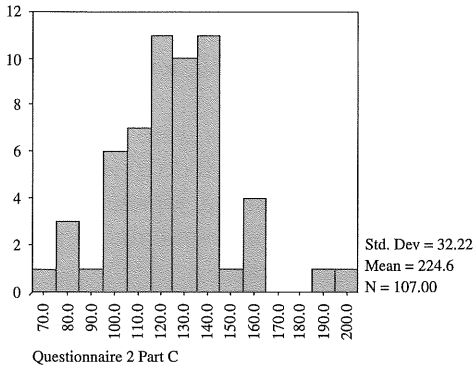


Figure 8 Distribution of FLCAS Scores

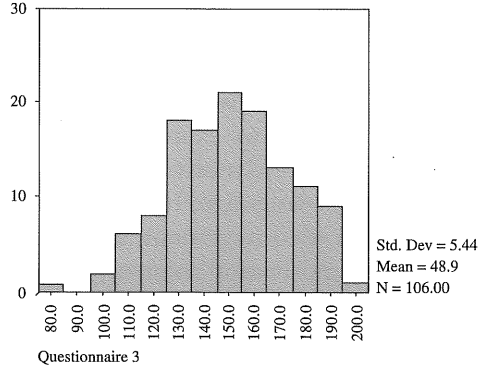


Figure 9 Distribution of (O)TAS Scores

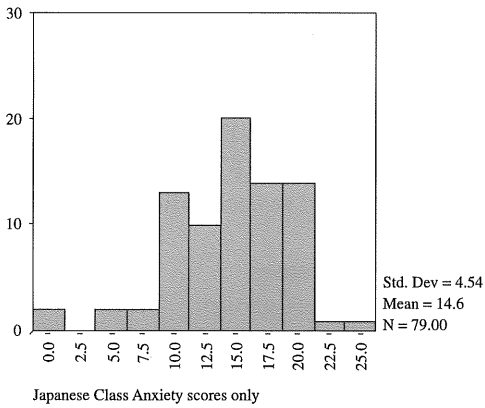


Figure 10 Distribution of J(F)CA Scores

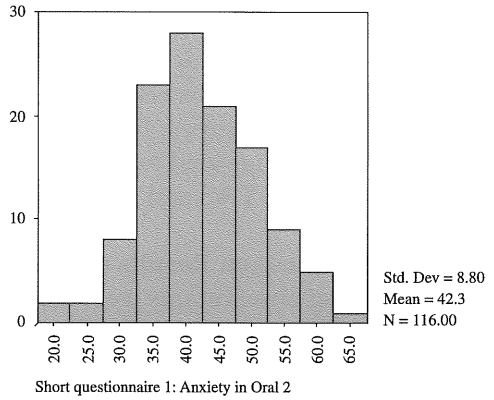
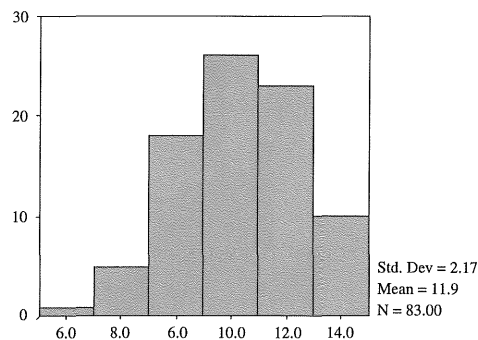
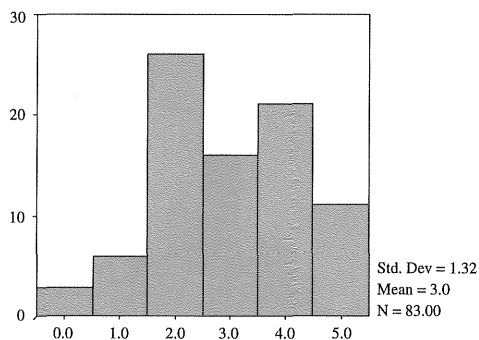


Figure 11 Distribution of Anxiety in Oral Examination 2



Short Questionnaire 2: Anxiety before the test (sum)

Figure 12 Distribution of Anxiety before Oral Examination 3



Short Questionnaire 2: Anxiety after the test (Anxometer only)

Figure 13 Distribution of Anxiety after Oral Examination 3

7 the strongest tendencies of the items asked at each question. Their distributions spread into normal bell curves even though skewed toward the higher end (except for FLCAS, which was skewed toward its lower end).

The affective factors examined through the questionnaire surveys were:

- 1) attitudes and motivation (AMTB:  $\alpha = .95$ ), including: (Part B-1) a) interest in foreign-language; b) attitudes toward Japanese and learning Japanese; c) parental encouragement; and d) orientation: integrative or instrumental; (Part B-2) e) motivation intensity; and f) desire to learn Japanese,
- 2) situation specific anxiety: a) FLCAS ( $\alpha = .88$ ): anxiety in the foreign-language classroom; b) (O)TAS ( $\alpha = .86$ ): oral-test anxiety; and c) J(F)CA ( $\alpha = .86$ ); and
- 3) state anxiety: a) in Oral Examination 2 ( $\alpha = .65$ ); and b) before ( $\alpha = .72$ ) and after (anxometer only) Oral Examination 3. The scores spread into various bell curves even though the distributions were skewed.

The two parts of motivation/attitude measurement, B-1 and B-2, are related to each other at a reasonable rate (refer to Table 2:  $\rho = .557^{***}$ ). However neither of them had any significant relation to the oral examination scores. In the situation specific anxiety categories, foreign-language classroom anxiety (FLCAS) was moderately ( $\rho = .483^{**}$ ) related to oral-test anxiety ((O)TAS) and to J(F)CA more strongly ( $\rho = .616^{***}$ ). (O)TAS and J(F)CA were not closely related to each other ( $\rho = .324^*$ ).

#### 4 Oral Examination Results and Learners' Affective Factors

The following observations were made for the whole subject group. State anxiety felt at Oral Examination 2 appears to have come equally from anxiety toward both the roleplay part (refer to Table 3:  $\rho = .898^{***}$ ) and the question and answer part ( $\rho = .874^{***}$ ) of the examination. Interestingly, the state anxiety scores both before and after Oral Examination 3 were weakly related to that at the previous examination ( $\rho = .288^*$ ,  $\rho = .326^*$ ) as well as to each other ( $\rho = .32^{**}$ ). J(F)CA, which mea-

Table 2 Spearman's Correlation: Anxiety, Motivation, and Attitudes

Part B-1 Co/Coeff N	Part B-1										
Part B-2	.577*** 107	Part B-2									
FLCAS	.323* 38	— 38	FLCAS								
(O)TAS	.248* 78	— 78	.483* 34	(O)TAS							
J(F)CA	— 46	— 46	.616*** 28	.324* 53	J(F)CA						
Anxiety Oral 2 (role)	— 77	— 77	— 34	.312*** 125	— 54	Anxiety Oral 2 (role)					
Anxiety Oral 2 (Q&A)	— 77	— 77	— 34	.347*** 125	.369** 54	.595*** 126	Anxiety Oral 2 (Q&A)				
Anxiety Oral 2 (state)	— 77	.336* 77	.360* 34	.351* 125	.311* 54	.898*** 126	.874*** 126	Anxiety Oral 2 (state)			
Anxiety before Oral 3	— 47	— 47	— 28	.676*** 53	.404*** 77	— 52	.291* 52	.288* 52	Anxiety before Oral 3		
Moti- vation Oral 3	— 47	— 47	— 28	— 53	— 77	— 52	— 52	— 52	— 78	Moti- vation Oral 3	
Anxiety after Oral 3	— 45	— 45	— 27	.351* 52	— 75	.347* 51	— 51	.326* 51	.320** 76	— 76	

N.B. \*\*\*indicates  $p < .001$ , \*\*indicates  $.001 < p < .01$ , and \*indicates  $.01 < p < .05$ .  
 — indicates that there was no significant correlation.

asures situation specific trait anxiety, was used immediately after Oral Examination 2. As a result, it might measure both situation specific trait and state anxiety in this study. J(F)CA related to the state anxiety in Oral Examination 2 ( $\rho = .311^*$ ) and the state anxiety before Oral Examination 3 ( $\rho = .404^{***}$ ).

Scores for Oral Examination 1 were negatively related to trait anxiety: FLCAS ( $\rho = -.428^{**}$ ); J(F)CA ( $\rho = -.367^{**}$ ), and state anxiety in Oral Examination 2 ( $\rho = -.225^*$ ). Scores for Oral Examination 2 were also negatively but less related to trait

Table 3 Spearman's Correlation: Affective Factors Surveyed and Results of Oral Examinations

Orals Co/Coeff N	Motivation Attitudes Part B-1	Motivation Attitudes Part B-2	FLCAS	(O)TAS	J(F)CA	Anxiety during Oral 2	Anxiety before Oral 3	Motivation toward Oral 3	Anxiety after Oral 3
Oral 1	— 95	— 95	-.428** 44	— 123	-.367** 68	-.225* 123	— 67	-.225* 67	— 65
Oral 2	-.076 92	.060 92	-.412** 43	— 124	-.284* 68	-.331*** 124	— 67	— 67	— 65
Oral 3	— 59	— 57	— 31	— 74	-.271* 78	-.300** 75	— 76	-.296** 76	— 74
Oral 4	— 57	— 57	— 30	— 70	-.275* 73	-.298* 71	— 71	-.240* 71	— 69
Average	— 96	— 96	-.435** 44	— 124	-.376** 78	-.349*** 124	— 77	-.300** 77	— 75

N.B. \*\*\*indicates  $p < .001$ , \*\*indicates  $.001 < p < .01$ , and \*indicates  $.01 < p < .05$ .

— indicates that there was no significant correlation.

anxiety: FLCAS ( $\rho = -.412^{**}$ ); J(F)CA ( $\rho = -.284^{**}$ ), but more strongly to state anxiety in Oral Examination 2 ( $\rho = -.331^{**}$ ).

Scores of Oral Examinations 3 and 4 were slightly differently related to anxiety and motivation from Oral Examinations 1 and 2. They were related negatively to trait anxiety: J(F)CA ( $\rho = -.271^*$ , and  $\rho = -.275^*$  respectively), state anxiety in Oral Examination 2 ( $\rho = -.3^{**}$ , and  $\rho = -.298^*$ ), and motivation toward Oral Examination 3 ( $\rho = -.296^{**}$ , and  $\rho = -.240^*$ ).

Each subjects' average scores for the oral examinations show a negative relation not only to trait anxiety: FLCAS (refer to Table 3:  $\rho = -.435^{**}$ ); J(F)CA ( $\rho = -.376^{**}$ ), but also to state anxiety: Anxiety during Oral Examination 2 ( $\rho = -.349^{***}$ ).

To investigate how motivation/attitudes, trait and state anxiety, and oral examination results (performance) influenced one another, a step-wise regression was applied to all variables observed. The analysis showed strongly that there are additional factors to help account for variations in the oral examination scores (high residual sum). However, the indication was that anxiety felt in the examination (oral examination state anxiety shown as 'Anxiety during Oral 2' in Table 3) was most related to the oral examination results. Therefore, it can be a good predictor and a leading explanatory factor for the examination results. Unfortunately, some subjects were missing randomly at each questionnaire survey, so that the number of subjects who replied to all the questionnaires was small (19). Therefore, further investigation of a larger sample needs to be conducted for confirmation of this result.

## 5 Subgroups According to Learner Variables

The results from the above analysis suggested that situation specific state anxiety is

possibly the best predictor among affective factors measured in this study. To explore how these factors might have interplayed with one another, the subjects were divided according to the following contrastive subject variables: a) gender, b) nationality, c) first language, d) prior experience with foreign-languages, and e) oral examination scores (high, medium, low). In the following sections, the contrastive subgroups were compared in terms of 1) oral examination scores, 2) motivation, 3) situation specific (trait) anxiety, and 4) state anxiety. The relationships among the factors within and between the subgroups were examined last.

### 5.1 Male and Female Subgroups

When the subjects were divided into female and male subgroups, further details regarding relationships among the factors were revealed.

- 1) Oral examination scores: Male subjects improved more than female subjects in terms of oral examination scores through the four examinations. However the two subgroups were not different significantly ( $z$  scores:  $-.004$ ,  $-.093$ ,  $-1.253$ ,  $-1.49$  for each oral examination  $< 1.96^*$ ).
- 2) Motivation: Males ( $n = 40$ ) and females ( $n = 58$ ) differed in terms of motivation ( $\chi^2 = 6.831^{**}$ ). Females had stronger motivation and more positive attitudes toward Japanese than male subjects, which was particularly reflected in Part B-1 (attitudes and orientation:  $\chi^2 = 8.282^{**}$ ).
- 3) Situation specific anxiety: FLCAS, (O)TAS, and J(F)CA were examined. Overall, female subjects appeared to be more anxious than male subjects. (O)TAS ( $\chi^2 = 5.497^*$ :  $n^f = 69$ ,  $n^m = 54$ ), and J(F)CA ( $\chi^2 = 5.168^*$ :  $n^f = 51$ ,  $n^m = 26$ ).

Table 4 Test Scores and Distribution for Males and Females

Median Test Scores		Female	Male
Oral 1	Mean Rank	74.51	74.49
	> Median	37 (46.3%)	35 (51.5%)
	$\leq$ Median	43	33
		$n = 80$	$n = 68$
Oral 2	Mean Rank	72.70	72.36
	> Median	38 (48.1%)	33 (52.5%)
	$\leq$ Median	41	33
		$n = 79$	$n = 66$
Oral 3	Mean Rank	47.53	54.98
	> Median	29 (48.3%)	21 (52.5%)
	$\leq$ Median	31	19
		$n = 60$	$n = 50$
Oral 4	Mean Rank	44.12	52.70
	> Median	23 (39.7%)	21 (56.8%)
	$\leq$ Median	34	16
		$n = 57$	$n = 37$

- 4) State anxiety: Both subgroups were similar except for state anxiety felt just before Oral Examination 3. Before Oral Examination 3, female subjects were much more anxious as a subgroup (mean rank: female 43.79:  $n = 50$ ; male 28.33:  $n = 26$ ). A lower proportion of the male subjects ( $>$  Median: 23%) felt anxiety as strongly as the female subjects ( $>$  Median: 46%).

Relationships among motivation, anxiety, and oral examination scores:

- A) Within the subgroups: Each subgroup's anxiety levels and the scores for the oral examinations correlated negatively in a very similar manner to the entire group, but less significantly. Motivation scores did not correlate either with the oral examination scores or anxiety. The only exception was that male subjects' motivation correlated to Oral Examination 2 positively ( $\rho = .343^*$ ;  $n = 37$ ).
- B) Between the subgroups: The comparisons of mean scores among motivation, situation specific anxiety, and state anxiety clearly show that the female subjects were more motivated and anxious. Even if overall examination scores between the two subgroups were not much different from each other, the less anxious and less achievement-oriented (motivated) male subjects slightly out-performed the females in the last two oral examinations.

## 5.2 Nationalities

The subjects were divided into three subgroups according to their nationalities: Chinese (including Hong Kong, Taiwan, China:  $n = 25$ ), Australian (including 1 English:  $n = 38$ ), and Other nationality subgroups ( $n = 30$ ).

- 1) Oral examination scores: subgroup scores were Other at the top (mean rank: 61.23), followed by Australian (m.r.: 44.91), and then Chinese (m.r.: 35.44). They seem to be three distinct subgroups regarding all oral examination scores except Oral Examination 1. On the average, they were significantly different in their oral examination results ( $\chi^2 = 13.026^{***}$ : Table 5).
- 2) Motivation: the Chinese and Other subgroups were not very different from each other regarding attitudes and orientation ( $z = -.051$ ,  $< 1.96$ ,  $p = .05$ ) and intensity of motivation and desire to learn Japanese ( $z = -.592$ ,  $< 1.96$ ,  $p = .05$ ). However, the Australian subgroup was different from the other two with lower scores in terms of intensity of motivation and desire ( $\chi^2 = 6.97^*$ ), with the mean rank of 39.0 for Australian, 56.1 for Chinese, and 52.6 for the Other nationality subgroups (Kruskal-Wallis Test).
- 3) Situation-specific anxiety (FLCAS, (O)TAS, J(F)CA): The subgroups dif-

Table 5 Comparison of Oral Examination Score Distributions: Nationality Subgroups

Kruskal-Wallis Test	Scores for Oral Examination 1	Scores for Oral Examination 2	Scores for Oral Examination 3	Scores for Oral Examination 4	Average Scores
Chi-Square	5.338	10.762	8.574	6.859	13.026
df	2	2	2	2	2
Asymp. Sig.	.069	.005	.014	.032	.001

Table 6 State Anxiety Score Distribution for Nationality Subgroups

Median Test: State Anxiety		Australian	Chinese	Other
In the roleplay, Oral 2	Median <	14 (42.2%)	11 (64.7%)	10 (41.7%)
	≥	19	6	14
In the Q & A, Oral 2	Median <	13 (39.4%)	13 (76.5%)	10 (41.7%)
	≥	20	4	14
Before Oral 3	Median <	5 (29.4%)	7 (53.8%)	8 (53.3%)
	≥	12	6	7
After Oral 3	Median <	9 (56.3%)	5 (41.7%)	5 (33.3%)
	≥	7	7	10

Table 7 Median Test for Nationality Subgroups

Median Test	Anxiety at the roleplay part of Oral 2	Anxiety at Q&A part of Oral 2	Anxiety before Oral 3	Anxiety after Oral 3
N	74	74	45	43
Median	24	17	12	3
Chi-Square	2.686	6.867	2.501	1.691
df	2	2	2	2
Asymp. Sig.	.261	.032	.286	.429

ferred from one another in their ranking and spread (FLCAS: Chinese > Australian > Other; (O)TAS: Other > Chinese > Australian; J(F)CA: Chinese > Australian > Other); though the differences were not significant ( $p > .05$  in either rank test or frequency test). The Chinese subgroup had higher situation specific anxiety than the other two subgroups (refer to Table 6).

- 4) State anxiety: The three subgroups did not differ significantly, although the Chinese subgroup tended to have slightly higher state anxiety than the other two subgroups. A Mann-Whitney U Test did not indicate any significant difference among the subgroups. However, the Median Test (Table 7) shows a significant difference among the subgroups regarding anxiety felt in the question-and-answer part of Oral Examination 2 ( $\chi^2 = 6.867^*$ ).

Relationships among motivation, anxiety, and oral examination scores:

- A) Within the subgroups: The scores within each of the three subgroups correlated differently from those for the group as a whole. Overall, there was much less correlation in the subgroups compared to the whole group. The correlation of the whole group between motivation and situation specific anxiety (FLCAS) almost disappeared from the Australian and Chinese subgroups. Only the Other subgroup indicated stronger negative correlations between their FLCAS and oral examination scores (Oral 2:  $\rho = -.719^{**}$ ;  $n = 15$ ; Oral 3:  $\rho = -.742^{**}$ ;  $n = 10$ ). Correlations between oral examination scores and state anxiety also decreased in the Australians and Chinese subgroups but increased in the Others subgroup. Situation specific anxiety re-

lated more to state anxiety in the Other subgroup (FLCAS and state anxiety in Oral Examination 2:  $\rho = .836^{***}$ ;  $n = 11$ ).

- B) Between the subgroups: The three subgroups did not differ much in their situation specific anxiety or state anxiety either. However, they were different in motivation (intensity and desire:  $x^2 = 6.970^*$ ), and oral examination scores ( $x^2 = 13.026^{***}$ ). The Other subgroup, who had the weakest situation specific anxiety and was equally as motivated as the Chinese subgroup, performed best. The Chinese subgroup, with similar motivation as the Other subgroup and more situation specific anxiety, performed the least well. The Australian subgroup had lower motivation and performed second best.

### 5.3 Different First Languages

- 1) Oral examination scores: The subjects ( $n = 85$ ) were divided into three subgroups, English ( $n = 31$ ) and Chinese ( $n = 47$ ) and Other Language ( $n = 7$ ) speakers. The three subgroups were very distinct (Kruskal-Wallis: Oral 2:  $x^2 = 10.732^{**}$ ; Oral 3:  $x^2 = 8.307^*$ ; Oral 4:  $x^2 = 13.894^{***}$ ). The two major subgroups, Chinese and English speakers, demonstrated a significant difference as the year progressed (Oral 3:  $z = -2.171^*$ ; Oral 4:  $z = -2.601^{**}$ ). The Chinese subgroup performed the least well among the three subgroups. More Chinese-speaking subjects were found below the median in all subjects. The Other Language subgroup performed significantly better than the English- and Chinese-speaking subgroups (refer to Table 8).
- 2) Motivation: The three subgroups were not different from one another in terms of their motivation toward learning Japanese (Kruskal-Wallis and Median Test).
- 3) Situation-specific anxiety: The Other Language subgroup had distinctively low anxiety scores in FLCAS and J(F)CA compared with the Chinese and English speakers (Kruskal-Wallis test). Not much difference was observed between the English- and Chinese-speaking subgroups.

Table 8 Oral Examination Score Distribution for First-Language Subgroups

Median Test: Frequencies Scores		First-Language		
		Chinese	English	Other
Oral 1	Median <	17	17	5
	≥	30	14	2
Oral 2	Median <	17	18	6
	≥	28	12	1
Oral 3	Median <	8	12	5
	≥	21	4	2
Oral 4	Median <	9	10	6
	≥	20	5	0



Table 9 Comparison of Trait Anxiety Score Distributions: First-Language Subgroups

Kruskal-Wallis Test	FLCAS	(O)TAS	J(F)CA
Chi-Square	7.266	1.623	2.893
df	2	2	2
Asymp. Sig.	.026	.444	.235

- 4) State anxiety: As seen for situation specific anxiety, Other Language speakers were very low in state anxiety, and formed a very distinctive subgroup from the other two. This resulted from a significant difference in the state anxiety felt by each subgroup in Oral Examination 2 ( $\chi^2 = 13.632^{***}$ ). The English- and Chinese-speaking subgroups differed little from each other either in Kruskal-Wallis Rank or the Median Test. However, there was no significant difference among the subgroups in Oral Examination 3.

Relationships among motivation, anxiety, and oral examination scores:

- A) Within the subgroups: The English subgroup did not display any correlation between their oral examination scores and FLCAS, whereas the whole group of subjects indicated moderate negative correlation. The English subgroup's state anxiety in Oral Examination 2 did not correlate to any oral examination scores, whereas the state anxiety of the whole group of subjects in Oral Examination 2 demonstrated some negative correlation to Oral Examinations 2 and 3. Situation specific anxiety, (O)TAS, was only related to the state anxiety felt before Oral Examination 3. The state anxiety felt by the English subgroup in Oral Examination 2 was not related to that in Oral Examination 3. The Chinese subgroup did not display any correlations between the oral examination scores and FLCAS. Unlike the English subgroup, they demonstrated moderate correlation between their (O)TAS and state anxiety in Oral Examinations 2 and 3 (Oral 2:  $\rho = .464^{**}$ ; before Oral 3:  $\rho = .577^*$ ). J(F)CA correlated to the state anxiety in Oral Examination 2 but not that before or after Oral Examination 3. The number in the Other Language subgroup was too small to make any further analysis within the subgroup.
- B) Among the subgroups: Motivation did not appear to correlate to anxiety or oral scores. Clearly anxiety levels and scores had an overall negative correlation among the three subgroups. The only exceptional case was in Oral Examination 3, where the English subgroup had a weak insignificant positive correlation between their scores and anxiety (as measured by J(F)CA).

#### 5.4 Prior Foreign-Language Learning Experience

A large portion of the subjects (72.9%) had prior experience in foreign-language learning. The experience appears not to have affected overall scores.

- 1) Oral examination scores: The two subgroups, Prior Experience and Non-

Prior Experience with foreign-language learning, did not perform differently in the four oral examinations (Kruskal-Wallis, Median Test).

- 2) Motivation: Overall the two subgroups did not differ distinctively in motivation scores, even though their scores spread slightly differently. The Prior Experience subgroup had stronger and more positive attitudes toward Japanese (mean rank: 50.64;  $n = 73$ ) than the Non-Prior Experience subgroup (m.r.: 44;  $n = 24$ ). However, the Non-Prior Experience subgroup had stronger desire and intensity toward Japanese language learning (mean rank for Prior Experience subgroup: 47.77; and Non-Prior Experience subgroup: 52.73).
- 3) Situation specific anxiety: Overall the two subgroups did not differ distinctively, even though their scores spread slightly differently.
- 4) State anxiety: The subgroups were very similar in state anxiety in terms of spread and intensity.

Relationships among motivation, anxiety, and oral examination scores:

- A) Within the subgroups: The Prior Experience subgroup did not demonstrate any significant negative correlation between J(F)CA and the oral examination scores. Their (O)TAS and J(F)CA scores were very strongly related to the state anxiety felt in Oral Examinations 2 and 3 ((O)TAS:  $\rho = .55^{**}$ ,  $\rho = .644^{***}$ ; J(F)CA:  $\rho = .489^{**}$ ,  $\rho = .455^{**}$ ). Interestingly a negative correlation was observed between their Oral Examination 2 scores and the amount of preparation and expectations about the results of Oral Examination 3 ( $\rho = -.431^*$ ).

The Non-Prior Experience subgroup had a strikingly different feature. Their motivation scores (AMTB: B-1) were strongly related to their state anxiety in Oral Examinations 2 and 3 ( $\rho = .634^*$ ;  $\rho = .715^*$ ). Their oral examination scores negatively correlated to the amount they prepared and their expectations about Oral Examination 3 ( $\rho = -.687^*$ ). Their state anxiety in Oral Examination 3 was very strongly correlated to the state anxiety in Oral Examination 2 ( $\rho = .986^{***}$ ).

- B) Between the subgroups: The performance in oral examinations was very similar in both subgroups. The Non-Prior Experience subgroup was higher in both situation specific and state anxiety and their oral performance appeared to have been more affected by their anxiety.

### 5.5 High, Medium, and Low Achievers

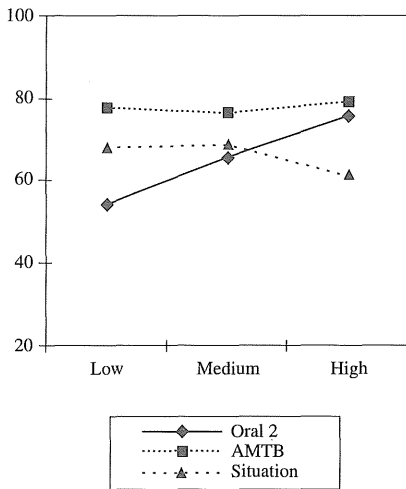
- 1) Oral examination scores: The subjects were divided into high ( $n = 36$ ,  $> 6.93$ ), medium ( $n = 25$ ,  $> 6.15$ ), and low ( $n = 35$ ,  $\leq 6.15$ ) achiever subgroups. The average score for each subgroup was 7.44 for high achievers, 6.54 for medium achievers, and 5.6 for low achievers.
- 2) Motivation: The three subgroups did not demonstrate any significant difference in motivation scores.
- 3) Situation specific anxiety: High achievers had significantly lower scores in FLCAS and J(F)CA (e.g., FLCAS: the mean rank was 16.31 ( $n = 44$ ) compared with 31.64 for the medium and 29 for the low achievers). Significant

differences in FLCAS and J(F)CA scores among the three subgroups were observed (FLCAS:  $\chi^2 = 12.465^{**}$ ; J(F)CA:  $\chi^2 = 11.946^{**}$ ). The low and medium subgroups differed from each other only in (O)TAS ( $\chi^2 = 4.676^*$ ).

- 4) State anxiety: The high achievers' state anxiety scores were consistently lower in the oral examinations. A marked difference was observed among the three subgroups in state anxiety in Oral Examination 2 ( $\chi^2 = 17.95^{***}$ ). However, there was no significant difference between the low and medium achievers.

Relationships among motivation, anxiety, and oral examination scores:

- A) Within the subgroups: Both the high achievers' and the medium achievers' (O)TAS scores were more strongly related to their state anxiety in Oral Examinations 2 and 3 (high achievers: Oral 2:  $\rho = .443^{**}$ ; Oral 3:  $\rho = .769^{***}$ ; medium achievers: Oral 2:  $\rho = .537^{***}$ ; Oral 3:  $\rho = .674^{**}$ ) than for the whole group of subjects. State anxiety felt by the two subgroups before Oral Examination 3 correlated to that felt in Oral Examination 2 (high:  $\rho = .486^*$ ; medium:  $\rho = .532^*$ ). The low achievers' scores of situation specific anxiety, FLCAS, (O)TAS, and J(F)CA, were unrelated to one another. Their J(F)CA (situation specific anxiety) correlated to the state anxiety they felt in Oral Examinations 2 and 3 (Oral 2:  $\rho = -.690^*$ ; (before) Oral 3:  $\rho = -.543^*$ ). However, there was no correlation between state anxiety in Oral Examinations 2 and 3.
- B) Among the subgroups: Motivation scores did not correlate with either anxiety



NB: Situation specific anxiety is a combination of FLCAS, (O)TAS & J(F)CA and is recalculated out of 100%. State anxiety is a combination of state anxiety during Oral Examination 2 and before and after Oral Examination 3.

Figure 14 Low, Medium, and High Achievers: Oral 2 Scores, Motivation and Situation Specific Anxiety

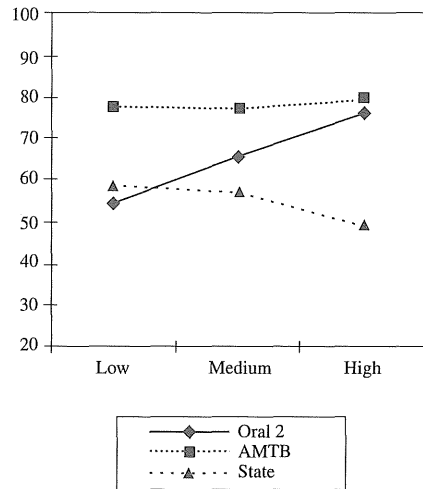


Figure 15 Low, Medium, and High Achievers: Oral 2 Scores, Motivation and State Anxiety

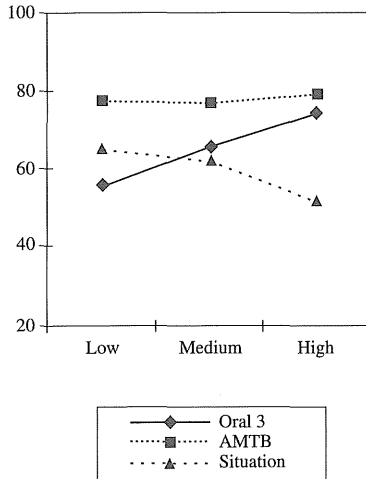


Figure 16 Low, Medium, and High Achievers: Oral 3 Scores, Motivation and Situation Specific Anxiety

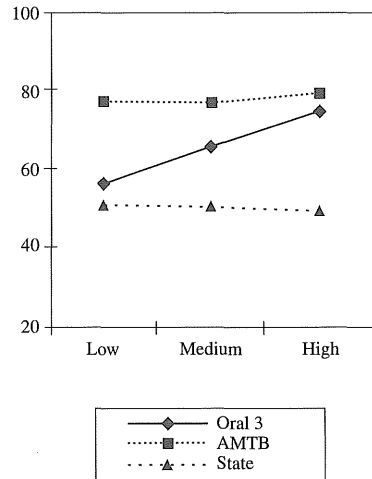


Figure 17 Low, Medium, and High Achievers: Oral 3 Scores, Motivation and State Anxiety

ety or oral examination scores (see Figures 14–17). The situation specific and state anxiety and oral examination scores held negative relationships through the four examinations as seen in Figures 14–17. High achievers tended to have lower anxiety than the medium or low achiever subgroups. Between the medium and low achievers, the tendency seemed to be not so clear. They differed less in terms of either state or situation specific anxiety than in their scores for the oral examinations.

## DISCUSSION

### 1 Motivation and Oral Examination Scores

There were strong correlations between the two parts of AMTB and among their various subcomponents (attitudes, orientation, motivation intensity, desire). Motivation measured by AMTB Part 1 had a weak correlation to foreign-language classroom anxiety (FLCAS:  $\rho = .323^*$ ) and oral examination anxiety ((O)TAS:  $\rho = .248^*$ ). For the whole group of subjects there was no significant correlation observed between the scores for motivation and oral examinations ( $44 \leq N \leq 145$ ). That is even though motivation and situation specific anxiety were correlated, there was no overall correlation found between motivation and oral examination scores.

However when the subjects were examined in subgroups, motivation appeared to have some effect on their performance. There were two cases where the oral examination scores correlated to motivation: a) male subgroup: Oral Examination 2 scores to motivation intensity and desire ( $\rho = .343^*$ ;  $n = 37$ ); and b) Other Nationality subgroup: Oral Examination 4 scores to both motivation intensity and desire

( $\rho = -.544^*$ ;  $n = 15$ ) and attitudes and orientation ( $\rho = -.820^{***}$ ;  $n = 15$ ). Among the three nationality subgroups, more motivated and highly anxious subjects appeared to be affected negatively by their motivation and anxiety (i.e., the Chinese subgroup).

The above results do not necessarily support findings of early studies, which found certain but not uniform correlations between attitudes and achievement in language subjects (e.g., Jordon 1941; Neidt and Hedlund 1967). They do not contradict later studies, which found an association between subjects' attitudes toward learning a second language and their achievement in that second language (Gardner and Smythe 1975; Burstall 1975). A more recent study (Gardner and MacIntyre 1991) suggested motivation has an 'energizing effect' on learning L1/L2 vocabulary and facilitates learning. In this study, scores for integrative and instrumental motivation were positively correlated ( $\rho = .425^{***}$ ;  $n = 107$ ) among the subjects, and the difference in motivation type did not appear to form contrastive subgroups.

## 2 Situation Specific Anxiety and Oral Examination Scores

Situation specific anxiety scores from FLCAS, (O)TAS, and J(F)CA related negatively to performance and moderate to strong correlations with one another. FLCAS (negative performance experiences, social comparisons, psychophysiological symptoms, and avoidance behaviors) demonstrated a significant correlation to oral examination performance. As Horwitz found (Horwitz and Young 1991), FLCAS had a moderate correlation to (O)TAS ( $\rho = .483^{**}$ ;  $n = 34$ ), and more strongly to J(F)CA ( $\rho = .616^{***}$ ;  $n = 28$ ). FLCAS displayed a higher negative correlation than (O)TAS or J(F)CA to Oral Examination 1 and 2 scores and the average score of the four oral examinations. However, J(F)CA was more evenly correlated to the scores of all oral examinations and their average score. It should be noted that (oral) test anxiety displayed almost no correlation to the oral-examination scores, whereas anxiety related to language learning (foreign-language classroom and Japanese-class anxiety) demonstrated a significant negative correlation to them. These results support both statements that language anxiety is more likely part of *communication apprehension* (MacIntyre and Gardner 1989) and that foreign-language anxiety can be divided into *communication apprehension*, *test anxiety*, and *fear of negative evaluation* (Horwitz et al. 1986). J(F)CA was again a very reliable scale to predict learners' performance (e.g., Gardner et al. 1976; Gardner et al. 1984; MacIntyre and Gardner 1989).

Even though the difference in anxiety between male and female subgroups was not large, the less anxious male subgroup improved more in terms of their oral examination scores. The more motivated and more anxious female subgroup obtained lower scores for their oral examination performances. Among the three nationality subgroups, the Other subgroup, which had the least situation specific anxiety and high motivation performed best in the oral examinations. The Chinese subgroup, which was equally motivated but had higher situation specific anxiety, performed the least well.

In summary, specific Japanese-class anxiety (J(F)CA) appeared to affect the subjects' performance in oral examinations more than more general foreign-language classroom anxiety (FLCAS) or oral-test anxiety ((O)TAS). Situation specific anxiety and motivation seem to counterbalance each other in their effect on oral examination performance. Highly motivated and less anxious learners tend to improve more than highly motivated and highly anxious learners. When learners are very anxious, motivation appears to have a 'debilitating' effect, whereas when they were less anxious their motivation 'facilitates' their oral performance.

### 3 State Anxiety and Oral-Examination Scores

State anxiety was measured three times. The first time was immediately after Oral Examination 2, when the subjects were asked to reflect on their anxiety during their performance in both the roleplay and Q & A sections of the examination. The anxiety felt in each section was significantly and strongly correlated. State anxiety in Oral Examination 2 correlated negatively not only with Oral Examination 2 scores ( $\rho = -.331^{***}$ ) but with the other oral examination scores as well ( $\rho = -.225^*$  to  $\rho = -.300^{**}$ ). State anxiety felt before Oral Examination 3 correlated with state anxiety after Oral Examination 3 ( $\rho = .320^{**}$ ), but not with Oral Examination 3 scores. Interestingly the time the subjects spent on preparation for Oral Examination 3 was negatively correlated with the Oral Examination 3 scores ( $\rho = -.296^{**}$ ). State anxiety felt before and after Oral Examination 3 correlated with the state anxiety in Oral Examination 2 (before:  $\rho = .288^*$ ; after  $\rho = .320^{**}$ ). State anxiety also correlated with situation specific anxiety ((O)TAS) in Oral Examination 2 ( $\rho = .351^{***}$ ), before Oral Examination 3 ( $\rho = .676^{***}$ ), and after Oral Examination 3 ( $\rho = .351^*$ ).

Very interesting contrasts were made between the subgroups with and without prior foreign-language experience. The state anxiety of the Prior Experience subgroup can be explained by situation specific anxiety ((O)TAS and J(F)CA), whereas motivation intensity appears to explain the state anxiety in the Non-Prior Experience subgroup. The Non-Prior Experience subgroup turned out to be 'more anxiety sensitive' than the Prior Experience subgroup. Given equivalent motivation, learners without prior language-learning experience tend to become more anxious in examinations than learners with prior language-learning experience. Novice foreign-language learners might have unrealistic expectations for tests. Some might spend an unnecessarily large amount of time preparing for tests. Others may not realize that a large amount of time is necessary to acquire language well enough to perform comfortably in examinations, or how nervous you can be in an oral examination situation. The comparison of the High, Medium, and Low Achiever subgroups clearly demonstrated that their scores for the oral examinations and anxiety levels were negatively related. However, as seen in Figures 14–17, the analysis into the subgroups demonstrated that anxiety was not the sole factor affecting the subjects' performance in oral examinations.

## CONCLUSION

The situation observed above was a classroom setting; that is, the purpose of the testing and data collection was primarily academic. The tests examined the subjects' achievement rather than proficiency in Japanese. Unlike a laboratory situation, the subjects were not pre-tested or screened to participate in the survey and tests. All examinations were kept as similar as possible in terms of their setting, relative difficulty to what was learned in the course, and manner of evaluation. The same students might have had a good day or a bad day in each examination. They might have prepared more for one examination than another. Nevertheless, the results from this case study support the findings from previous studies that anxiety is one of the best predictors of successful second-language learning (Gardner 1985). Learners' oral performance appears to be affected by state anxiety, which derives from situation specific anxiety, which is itself a personal trait. Both situation specific and state anxiety correlated with the oral examination results significantly but not evenly. The results also suggested a possible causal relationship among learners' language performance, anxiety, and motivation. State anxiety seems to interplay with motivation. Learners who are more motivated and the least anxious appear to perform best in oral examinations, and strongly motivated and very anxious learners perform worst.

## ACKNOWLEDGEMENT

This study was facilitated by a grant from the School of Languages at the University of Melbourne. Part of the data used in this study was collected in collaboration with J. Kumamoto-Healey. The author thanks her for permission to use the data for this study. The author also would like to express her gratitude to I. Gordon for his advice and help in statistical analysis, B. Lynch for comments on an earlier version of the manuscript, and various reviewers for their valuable comments.

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