

Techniques for Reducing Foreign Language Anxiety: Results of a Successful Intervention Study

Terri Lee NAGAHASHI

Faculty of Education and Human Studies

Akita University, Japan

Foreign language anxiety negatively impacts the quality of learning and is a critical factor in a learner's success or failure in learning a foreign language (Gardner and MacIntyre, 1987). Reducing students' language anxiety can enhance their overall learning experience and improve motivation and achievement. The purpose of this short-term intervention study was to examine the effectiveness of cooperative learning techniques for reducing foreign language anxiety among freshman students enrolled in Akita University's English for Academic Purposes (EAP) course. A total of 38 students participated in this intervention study, all of whom were a subset of a larger cross-sectional baseline study that was conducted to assess levels and primary sources of language anxiety (Nagahashi, 2007). Two survey instruments were used: the standardized Foreign Language Classroom Anxiety Scale (FLCAS) (Horwitz, Horwitz, & Cope, 1986) and a post-intervention questionnaire. The findings of this study suggest that structured cooperative learning activities may be effective in reducing language anxiety by providing a non-threatening, supportive environment in which to develop language skills.

Key words: : Affective Domain, Foreign Language Learning Anxiety, Cooperative Learning, Teaching Strategies, FLCAS

INTRODUCTION

Foreign Language anxiety is defined as "a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language-learning process" (Horwitz, Horwitz, & Cope, 1986, p.128). The significant role of language anxiety in foreign language learning has been demonstrated in several studies that show a negative correlation between high levels of anxiety and language achievement (Clement, Gardner, & Smith, 1977, 1980; Gardner, Smythe, Clement & Gliksmann, 1976; Gardner, Smythe, & Lalonde, 1984 as cited in MacIntyre, 1999). Although language anxiety is quite common among foreign

language learners, the students surveyed in this study had significantly higher scores on the Foreign Language Classroom Anxiety Scale (FLCAS) (see Appendix A) compared to published results for students surveyed in other foreign language programs (Nagahashi, 2007). The primary source of the students' anxiety appears to come from communication apprehension, a result that correlated with a low self-evaluation of speaking skills (Nagahashi, 2007). High levels of anxiety, along with low self-evaluations of skills, are detrimental to the learning process. According to MacIntyre (1999), "The combination of high levels of anxiety and low self-rated proficiency creates students with low levels of linguistic self-confidence, which reduces motivation for study and

communication in the second language” (p.41).

Research studies show that communication apprehension is relatively common among anxious students (Phillips, 1990; Young, 1990; Howitz, Horwitz, & Cope, 1986; Price, 1991 as cited in Phillips, 1999). Less anxious students can suffer as well because foreign language classrooms are places where learners “are frequently forced to perform in a state of ignorance and dependence in front of their peers and teacher” (Oxford, 1990, p. 142). Learning to communicate in a foreign language involves taking risks. The risk of appearing foolish in front of one’s peers and teacher, and the risk of feeling frustrated or ashamed about the inability to communicate effectively in the target language, can inhibit efforts. When a classroom environment is not conducive to taking appropriate risks, and there are few opportunities to produce the target language, it is more challenging for students to develop competence in oral skills. The challenge for teachers is to help create conditions that allow students more opportunities to communicate in the target language in a relaxed, supportive environment. A cooperative learning environment has been shown to reduce anxiety (Kagan, 1994) and provide more opportunities for students to produce language (Slavin, 1983a; Harel, 1992; Chamot and O’Malley, 1987; Long and Porter, 1985, as cited in Crandall, 1999).

COOPERATIVE LEARNING

Most Japanese students are familiar with cooperative learning. “From the beginning of formal education, Japanese children are taught to see themselves as equals, as part of a group.” and “Japanese elementary schools place so much emphasis on the group, and the individual as part of the group, that teaching and learning at this level cannot be taken out of an interpersonal context” (Ministry of Education, Culture, Sports, Science and Technology [MEXT], 1998, p.8). Although there is a dramatic shift in Japanese secondary schools from the cooperative learning environment of lower grades to a competitive learning

environment (in which students vie for admission to high-ranking upper secondary schools and prestigious universities) Japanese students are, nevertheless, familiar with the principles of cooperative learning.

Cooperative learning is characterized by several common elements that include: (1) positive interdependence, where the group has a common goal and each member’s contribution is important to the group’s success; (2) face-to-face group interactions in which each member is encouraged to participate, help others succeed, and learn from each other; (3) individual and group accountability in which members divide the work and are individually responsible for specific tasks; (4) development of small group social skills involving negotiating and use of group interaction skills; and (5) group processing, which involves students reflecting on the group’s experience (Slavin, 1983b, 1990, Spencer, 1989, 1994, Johnson and Johnson, 1989, 1994 as cited in Crandall, 1999, p.227-229). Research studies show that students feel less intimidated when working with partners and in small groups (Berjano, 1987; Chang & Smith, 1991; Gunderson & Johnson, 1980; McGoarty, 1989 as cited in Campbell, 1998). Cooperative learning activities can foster active participation, a sense of community, emotional support and provide more opportunities for students to use the target language.

The purpose of this short-term intervention study was to test the hypothesis that implementing cooperative learning opportunities in the university classroom will reduce foreign language classroom anxiety associated with communication apprehension.

METHODS

Participants

There were 38 participants (81.6% female, n=31) from 2 majors at Akita University. All students were freshmen enrolled in the university’s English for Academic Purposes (EAP) class taught by the author and Professor Masako Sasaki. Students in Health Sciences were designated as Group A (n=12) and

students in the School of Education were designated as Group B (n=26) (Table 1). The number of class sessions was divided between the author and Professor Sasaki. This intervention study was conducted in the author's classes during the fall semester of 2006.

Table 1. Participants (n=38)

Group	n	Major
A	12 (1M/11F)	Health Sciences
B	26 (6M/20F)	School of Education

Intervention

Cooperative learning activities, designed to reduce language anxiety and increase opportunities for students to speak English, were implemented in each of the twelve classes taught by the author. Each class met for ninety minutes. Students were allowed to choose their partners and group members.

Pair work. Students engaged in pair work activities during each class session. Pair work activities included comparing answers for homework assignments, quizzing each other on new vocabulary, dictating model paragraphs and essays from the text, reading and commenting on each other's original paragraphs and essays, and reading aloud from the video transcript.

Group work. Small-group activities were designed to provide more opportunities for students to share their ideas and assist one another. Group work activities included "reading circles," where students took turns reading aloud from the text, comparing answers to reading comprehension exercises, making and presenting inferences about the readings, making and presenting summaries of the readings, brainstorming and presenting answers to questions posed by the teacher, and reading and responding to group members' original paragraphs and essays.

Survey Instruments

Two survey instruments were used to assess the effectiveness of the intervention for reducing students' language anxiety: the Foreign Language Classroom

Anxiety Scale (FLCAS) (Horwitz, Horwitz, & Cope, 1986) (Appendix A), and a short, 2-item, post-intervention questionnaire. The FLCAS is a standardized 33-item survey that assesses levels of anxiety related to three areas: (1) communication apprehension, (2) test anxiety, and (3) fear of negative evaluation. This instrument was selected because of its high internal reliability ($r = 0.93$), significant correlation between each item and the total anxiety score, high test-retest reliability, and high validity. The survey was translated into Japanese. Scores for 9 statements, items 2, 5, 8, 11, 14, 18, 22, 28, and 32, which were negatively keyed for anxiety, were calculated using a 5-point scale with 1 being "strongly agree" and 5 being "strongly disagree" (e.g., Item 2 "I don't worry about making mistakes in my English class."). Scores for the remaining twenty-four statements, which were positively keyed for anxiety, were calculated using a 5-point scale with 1 being "strongly disagree" and 5 being "strongly agree" (e.g., Item 1 "I never feel quite sure of myself when I am speaking in my English class."). Possible scores ranged from a minimum of 33 to a maximum of 165. Higher scores indicated a higher the level of anxiety.

In addition to the FLCAS, students also completed a short, post-intervention questionnaire that was created by the author. They responded to two questions: (1) "How do you feel about working with your partner?" and (2) "How do you feel about working with your group?"

Analytical Procedures

Data was collected during the fall semester of 2006 and analyzed using Excel statistical software (Microsoft Corporation) and Sigmatat statistical software (Jandel Scientific). Means and standard deviations were calculated for each group to determine their pre- and post-intervention levels of foreign language anxiety. Each item of the survey was analyzed to determine some of the primary sources of the students' anxiety. Results were compared with information gained from the post-intervention questionnaire. Data were statistically analyzed by paired t-testing. P values <

0.05 were considered statistically significant.

RESULTS

Foreign Language Classroom Anxiety Scale (FLCAS) Baseline Results

The top five sources of foreign language classroom anxiety among the students surveyed in this study are shown in Table 2. All items are related to communication apprehension and are represented in statements 33, 18, 1, 24, and 13, respectively, of the FLCAS.

Table 2. Top five sources of anxiety (n=38)

Ranking	FLCAS Statement	Mean Score	Standard Deviation
1	33. I get nervous when the English teacher asks questions which I haven't prepared in advance.	4.16	0.59
2	18. I feel confident when I speak in my English class. (Score indicates disagreement with statement)	4.05	0.66
3	1. I never feel quite sure of myself when I am speaking in my English class.	3.95	0.93
4	24. I feel very self-conscious about speaking English in front of other students.	3.90	0.92
5	13. It embarrasses me to volunteer answers in my English class.	3.87	0.78

Note: Scores are based on a 1 to 5 scale in which 1 represents "strongly disagree" and 5 represents "strongly agree," except in statement number 18 which was negatively keyed for anxiety with 1 being "strongly agree" and 5 being "strongly disagree"

Mean baseline total FLACS scores were 109.8 + 13.7 among Health Science majors and 106.8 + 18.5 among the School of Education majors, both of which were relatively high compared to published scores for students in other foreign language learning situations (Nagahashi, 2007).

Foreign Language Classroom Anxiety Scale (FLCAS) Intervention Results

All 38 students completed the Foreign Language Classroom Anxiety Scale (FLCAS) prior to and after intervention. The results give some insight into the changes in levels of anxiety that students experienced

during the intervention. The results of pre- and post-intervention FLACS assessments shown in Table 3 demonstrate that mean scores for Health Sciences majors (group A) decreased from 109.8 + 13.7 at baseline to 97.8 + 16.4 after intervention for a mean decrease of 12 (P=0.033). The School of Education majors (group B) mean scores decreased from 106.8 + 18.5 at baseline to 104.5 + 19.8 after intervention for a mean decrease of 2.3 (P=0.563). The FLCAS mean score for the combined groups (group A + group B) decreased from 107.8 + 17.0 at baseline to 102.4 + 18.8 after intervention for a mean decrease of 5.4 (P=0.095).

Table 3. Pre- and post-intervention Foreign Language Classroom Anxiety Scale (FLCAS) results (n=38)

Group	n	Major	Assessment	Mean	Standard Deviation	Range
A	12	Health Sciences	Baseline	109.8	13.7	91/131
			After	97.8	16.4	73/132
B	26	School of Education	Baseline	106.8	18.5	79/149
			After	104.5	19.8	71/145
Total	38	Both	Baseline	107.8	17.0	79/149
			After	102.4	18.8	71/145

The responses to FLCAS statements 33, 18, 1, 24, and 13 all decreased significantly for the total group, as shown in Table 4.

Table 4. Pre- and post-intervention comparison of top five sources of anxiety (n=38)

FLCAS Statement	n	Mean	Std Dev	P
33	38	4.158	0.594	<0.001
33-post	38	3.368	1.051	
18	38	4.053	0.655	<0.001
18-post	38	3.526	0.951	
1	38	3.947	0.928	0.003
1-post	38	3.421	0.948	
24	38	3.895	0.924	0.016
24-post	38	3.421	0.976	
13	38	3.868	0.777	<0.001
13-post	38	3.289	1.011	

Although the reduction in the total (group A + group B) FLCAS mean score did not quite reach statistical significance ($P=0.095$, a strong trend) due to insufficient power (not enough subjects), the responses to key statements 33, 18, 1, 24, and 13 all decreased significantly for the two groups. Group A improved significantly for each of the 5 statements ($P<0.001$, <0.001 , <0.003 , <0.016 and <0.001 for statements 33, 18, 1, 24, and 13). Group B improved significantly for statements 33, 18, 1, and 13 ($P=0.003$, 0.039 , 0.016 , and 0.037), but not statement 24 ($P=0.142$).

Secondary Questionnaire Results

All 38 students completed the questionnaire, which provided information about the students' feelings about their partners and groups.

In response to the first question, "How do you feel about working with your partner?" the majority of the students, (92.1%, $n=35$), responded positively. The top responses included: "good" ($n=8$); "fun" ($n=6$); "helpful" ($n=4$); "interesting" ($n=4$); "friendly" ($n=3$); and "comfortable" ($n=3$). One student (2.6%) reported feeling "confused" because she had not been able to find a partner. Two students (5.3%) did not respond to the question.

In response to the second question, "How do you feel about working with your group?" the majority of the students, (84.2%, $n=32$) responded positively. The adjectives that they used to describe their feelings included: "good," "very good," and "great" ($n=7$);

“interesting” (n=6); “fun” (n=5); and “helpful” (n=2). Four students (10.5%) responded with other comments including “not enjoy,” (n=1) “slightly nervous,” (n=2) and “feel confusion,” (n=1). Two students (5.3%) did not respond.

Overall, the students’ responses to the structured cooperative activities were positive. The majority of students seemed to enjoy and benefit from the experience of working with their partners and group members.

DISCUSSION

Foreign language anxiety inhibits students’ efforts, reduces motivation, and slows acquisition progress. Baseline levels of foreign language classroom anxiety among the 38 EAP students surveyed in this study were relatively high and primarily associated with communication apprehension. The purpose of this short-term, intervention study was to help alleviate communication apprehension by creating opportunities for students to produce the target language in a more relaxed, supportive environment. Cooperative learning activities were selected because they were culturally appropriate and easily integrated into the established EAP course.

Quantitative analyses of the top five key statements associated with communication apprehension revealed a statistically significant decrease in scores for both groups. This reduction correlated with a very positive response to the cooperative learning activities. Changes in the total FLACS mean scores were different in the two groups. Quantitative analyses of the data revealed that the students majoring in Health Sciences experienced a greater reduction in the level of language anxiety than students majoring in Education. The reason for the difference is unknown, but it could be related to relatively higher baseline levels of learning anxiety among Health Sciences majors. Despite the improvement in anxiety scores, the amount of residual learning anxiety remained high after the intervention. The short duration of the intervention may be a contributing factor, and it is possible that a longer

intervention might produce a greater reduction in the levels of language anxiety that students are experiencing.

CONCLUSION

In conclusion, the results of this short-term, intervention study suggest that cooperative learning strategies may help reduce students’ anxiety in the foreign language classroom. Communication apprehension, in particular, may be diminished by providing opportunities for students to develop speaking skills in small, supportive groups of their peers. While it may be difficult for some instructors to integrate cooperative learning activities into a traditional classroom, the results of this study show that students benefit from the availability of opportunities to actively engage in the learning process. This study demonstrates that implementation of cooperative learning strategies is a technique that teachers can use to help reduce foreign language anxiety and provide more opportunities for students to produce language. Further studies are required to determine whether this technique improves overall learning success, but the results of previous studies suggest that the reduction in learning anxiety in this study would be associated with improved learning outcomes.

REFERENCES

- Campbell, C. (1999). Language anxiety in men and women: Dealing with gender difference in the language classroom. In D. Young (Ed.), *Affect in foreign language and second language learning: A practical guide to creating a low-anxiety classroom atmosphere*. (pp. 191-215). Boston: McGraw-Hill.
- Crandall, J. (1999). Cooperative language learning and affective factors. In J. Arnold (Ed.), *Affect in language learning*. (pp. 226-245). Cambridge: Cambridge University Press.
- Gardner, R.C., & MacIntyre, P.D. (1987). The role of

anxiety in second language performance of language dropouts. *Research Bulletin* No 657. London, Ontario: University of Western Ontario.

Horwitz, M.B., Horwitz, E. K., & Cope, J. A. (1986). Foreign language classroom anxiety. *The Modern Language Journal*, 70 (2), 125-132.

Kagan, S. (1994). *Cooperative Learning*. San Juan Capistrano, CA: Kagan Cooperative Learning.

MacIntyre, P. (1999). Language anxiety: A review of the research for language teachers. In D. Young (Ed.), *Affect in foreign language and second language learning: A practical guide to creating a low-anxiety classroom atmosphere*. (pp. 24-45). Boston: McGraw-Hill.

Ministry of Education, Culture Sports, Science and Technology (MEXT) (1998). *The educational system in Japan: Case study findings. Chapter 3 Individual differences in the Japanese education system*. Retrieved May 17, 2006, from <http://www.ed.gov/pubs/JapanCaseStudy/chapter3d.html>

Nagahashi, T.L. (2007). A cross-sectional study of foreign language anxiety among freshmen at Akita University. *Bulletin of The Center for Educational Research and Practice*, 29. Akita University.

Oxford, R.L. (1990). *Language learning strategies: What every teacher should know*. Boston: Heinle & Heinle.

Phillips, E. (1999). Decreasing language anxiety: Practical techniques for oral activities. In D. Young (Ed.), *Affect in foreign language and second language learning: A practical guide to creating a low-anxiety classroom atmosphere*. (pp. 124-143). Boston: McGraw-Hill.

APPENDIX A

The Foreign Language Classroom Anxiety Scale

- 1 . I never feel quite sure of myself when I am speaking in my English class.
英語の授業で、英語で話しているときまったく自信が無い。
- 2 . I don't worry about making mistakes in my English class.
英語の授業で、間違えることを気にしない。
- 3 . I tremble when I know that I'm going to be called on in my English class.
英語の授業で、あてられそうだとわかると(ひとりで)震えてしまう。
- 4 . It frightens me when I don't understand what the teacher is saying in the English class.
英語の授業で、先生の言っていることが理解できないと落ち着かなく不安になる。
- 5 . It wouldn't bother me at all to take more English language classes.
英語の授業を増やしても全然苦にならない。
- 6 . During English class, I find myself thinking about things that have nothing to do with the course.
英語の授業中、授業とは全く関係の無いことについて考えていることがある。
- 7 . I keep thinking that the other students are better at English than I am.
他の生徒の方が自分より英語ができるということも思っている。
- 8 . I am usually at ease during my English class.
英語の授業中はたいてい緊張せずに不安がない。
- 9 . I start to panic when I have to speak without preparation in my English class.
英語の授業で準備無しに英語で話さなくてはならなくなるとあわて出してしまう。
- 10 . I worry about the consequences of failing my English class.
英語の授業の単位を落としてしまわないかと不安である。
- 11 . I don't understand why some people get so upset over English class.
英語の授業となると落ち着かなくなる人がい

- るが、私にはその理由が理解できない。
- 12 . In English class, I can get so nervous I forget things I know.
英語の授業となると、とても緊張し、わかっていることも忘れてしまう。
- 13 . It embarrasses me to volunteer answers in my English class.
英語の授業で自分から進んで答えるのは恥ずかしく当惑してしまう。
- 14 . I would not be nervous speaking English with native speakers.
ネイティブ・スピーカー（英語母語話者）と英語で話しても緊張しないだろう。
- 15 . I get upset when I don't understand what the teacher is correcting.
先生が間違いを直している内容を理解できないと動揺する。
- 16 . Even if I am well prepared for English class, I feel anxious about it.
英語の授業の準備をよくしたとしても、授業のことを考えると不安になる。
- 17 . I often feel like not going to my English class.
英語の授業に行きたくないと思う。
- 18 . I feel confident when I speak in my English class.
英語の授業で、自信を持って英語を話している。
- 19 . I am afraid that my English teacher is ready to correct every mistake I make.
英語の先生は私がする間違いをすべて直そうとしているのではないかと思う。
- 20 . I can feel my heart pounding when I am going to be called on in my English class.
英語の授業であてられそうになると、心臓がドキドキするのがわかる。
- 21 . The more I study for an English test, the more confused I get.
英語のテスト勉強をすればするほど、混乱しわからなくなってしまう。
- 22 . I don't feel pressure to prepare very well for my English class.
英語の授業のための準備を十分にしないでというプレッシャーは感じない。
- 23 . I always feel that the other students speak the English language better than I do.
他の生徒の方が自分より英語をうまく話せる
- と、いつも思う。
- 24 . I feel very self-conscious about speaking English in front of other students.
他の生徒の前で英語を話すととてもあがってしまう。
- 25 . English class moves so quickly I worry about getting left behind.
英語の授業はとても早く進むので、落ちこぼれるのではないかと心配である。
- 26 . I feel more tense and nervous in my English class than in my other classes.
英語の授業では、他の教科の授業のときより緊張する。
- 27 . I get nervous and confused when I am speaking in my English class.
英語の授業で英語を話すとき緊張し混乱してしまう。
- 28 . When I am on my way to English class, I feel very sure and relaxed.
英語の授業に向かう途中、とても自信がありリラックスしている。
- 29 . I get nervous when I don't understand every word the English teacher says.
英語の先生の言う単語一語一語がすべて理解できないと落ち着かない。
- 30 . I feel overwhelmed by the number of rules you have to learn to speak English.
英語を話すために学ばなくてはならない規則の数の数に圧倒される。
- 31 . I am afraid that other students will laugh at me when I speak English.
英語を話すと他の生徒が自分のことを笑うのではないかと思う。
- 32 . I would probably feel comfortable around native speakers of English
英語のネイティブ・スピーカー（英語母語話者）のそばにいても、おそらく苦痛を感じないだろう。
- 33 . I get nervous when the English teacher asks questions which I haven't prepared in advance.
事前に準備していなかった質問を英語の先生から受けると、緊張する。

Evaluating the EAP Program of Akita University—the Second Round Study

教養基礎科目『大学英語』の効果検証

渡部 良典

Yoshinori WATANABE

抄 録

教養基礎科目『大学英語Ⅰ』および『大学英語Ⅱ』の効果検証結果の一部を報告する。当科目は2004年度まで行われていた『英語リスニング』、『英語ライティング』を改変させ、2005年度から実施された全学部1年生必修の科目である。2005年4月学年当初に行ったクラス編成テスト、および2006年2月学年末に行った学年末テストの結果をもとに初年度の効果を検証した。その結果読解能力、聴解能力には有意に向上したが、語彙・文法に関しては変化が見られなかった。さらに2006年度のテスト結果については次年度からの結果を比較検証するための基礎データとして使用されるよう、基本統計を報告した。効果をさらにきめ細かく検証するために授業観察、面接調査などを行うことが望まれる。

Introduction

The purpose of the EAP program of Akita University is to help students to acquire academic skills as well as English skills that they need to function in various courses of the university in the subsequent years. The present paper reports on part of the evaluation study of the program by referring to the scores of the tests that were carried out at the beginning and the end of the 2005 academic year. Besides the evaluation of the initial year of the program, the results of the placement test of the second year that started in the April of 2006 are also reported.

The EAP Program of Akita University

The EAP (English for Academic Purposes) Program of Akita University was implemented in 2006, as a result of long-term informal and formal

observations and experiences of the teaching staff, who had been involved in the English teaching program for a number of years. A brief description of the rationale for the curricular innovation is in order below.

In 1997 major curricular changes were made involving all the three departments of the university. The English program was also innovated in various ways. The most important changes were as follows: 1) a common textbook should be used by all teachers, 2) the same test should be administered to all the twenty-one classes, each of which was taught by different teachers, 3) a common set of criteria should be used when giving a final grade, and 4) a listening course be offered during the first term, and a writing course be offered during the second term, on the assumption that the input practice would lead up to a production practice.

The effectiveness of the program was observed particularly in the following areas.

- 1) Cooperation among the staff was promoted during the process of selecting a common textbook.
- 2) Cooperation among the staff was enhanced also during the process of constructing a common course-wide test by a group of a committee, which subsequently is going through an inspection among the whole staff.
- 3) By employing a common textbook, better communication was achieved among the staff. Each individual teacher had a chance to talk to an other staff member whenever he or she had a problem in his or her teaching, when he or she had identified problems with the textbook.
- 4) The students' improvement in English ability was measured by a common set of standards, so it became possible to assess the effectiveness of the program (see Watanabe, 2004).
- 5) The final course grade was assigned on the basis of a common set of criteria, so a sense of unfairness had greatly been decreased among the students.

Despite the effectiveness of the program, however, it gradually became apparent that the program was not working as it had been expected to be in various aspects. First, it was noticed that for the students to transfer the knowledge and skills that they should have acquired in the first term to those which they would acquire in the second term, the topic and skills need to be connected in some way or other between the two terms. In the absence of such a connection between the two sets, two courses were taught as if they were independent courses, contrary to the original intention. The second major reason for the dissatisfaction of the course is that students were remarkably different in the levels of English proficiency. A number of students are highly proficient in English, whereas other students are very low, so teachers would often complain that many students, particularly good students, suffer. And yet, even low students have to take the course, so the course should be so constructed that it may be rewarding to them in a way in which it helps them to be prepared to accomplish major courses that they will take during the subsequent years at university. Thirdly, the greatest

emphasis of the curriculum was placed on the acquisition of language skills. However, recent research indicates that language learning is enhanced when it is learned with some specific contents. This also appeals to our common sense that we can best learn a language to use it for some purposes.

To improve the 1997 program, a new curriculum was proposed in 2004 and implemented in the 2005 academic year. The course is based on the following principles. First, the materials should be the ones which will help students acquire knowledge of specific academic topics in English. Second, English should be taught in combination with some academic skills such as note-taking, critical thinking, data gathering, synthesizing data, interviewing, presentation, writing a short report, and so forth. Third, all the four skills (i.e., reading, listening, writing, and speaking) should be taught simultaneously. Fourth, each student should be placed in a course where he or she may receive the most appropriate instruction that suits his or her level of English proficiency.

Results of Round 1 Evaluation Study

In this section, the effectiveness of the program is reported of the academic year 2005 based on the results of the pre- and post-course tests. The placement tests used were the A.C.E. test, a proficiency test developed by an NPO association called ELPA (English Language Proficiency Assessment). Three different versions of the test were administered, but the degree of difficulties had been equated by the latent trait measurement or the Item Response Theory (e.g., Henning, 1987).

Notice that all the three tests were of the same type, but scoring procedures were different for the 2005 tests and the 2006 test for various practical reasons. Thus, it is not possible to compare the changes in test scores over the two years, although it is hoped that as the test will be administered in the future, the present data will serve as a baseline data against which the future test scores will be plotted. For the sake of clarity, the results will be presented and discussed separately for the 2005 and 2006 tests. Meanwhile, the

2005 data will be used to evaluate the effectiveness of the course by comparing the two sets of scores that were obtained at the beginning of the course in April 2005 and at the end of the course in February 2006.

Basic statistics of the 2005-2006 first year students

The 2005-2006 test results are presented and discussed in comparative forms. Table 1 shows that mean scores significantly increased in the total, in

Listening, and in Reading. The results indicate that the program was effective in helping students improve in these areas. However, the scores of the Vocabulary and Grammar component slightly decreased, although difference was not statistically significant. This means that the program did not succeed in helping students to improve in vocabulary and grammar. In order to examine the result in somewhat greater detail, it may be useful to break down the scores by departments. The results are provided in Table 2.

Table 1 : Basic Statistics for the 2005 - 2006 EAP Course Evaluation

	Mean	SD	Min	Max	Gain	t	df
Listening 1	9.63	2.22	0	14			
Listening 2	10.17	2.55	0	14	0.54	5.30 ***	763
Vocabulary & Grammar 1	19.12	4.72	1	30			
Vocabulary & Grammar 2	19.09	4.85	0	30	0.03	0.40	763
Reading 1	11.65	2.81	0	16			
Reading 2	12.42	2.97	0	16	0.77	7.33***	763
Total 1	40.40	8.03	10	59			
Total 2	41.68	8.51	3	60	1.28	5.19***	772

Notes. $n = 757$. Max = Maximum score. Min = Minimum score. 1 = The first round test that was administered on the first day of the course in April, 2005. 2 = The second round test that was carried out on the last day of the course in February, 2006. *** = $p < .001$ (two-tailed).

The scores were significantly different between three departments (Table 2), the scores of School of Medicine being on the top, and the Faculty of

Education & Human Studies and the Faculty of Engineering and Natural Resources followed in this order.

Table 2 : Breakdown of Descriptive Statistics of the 2005 - 2006 EAP course by Departments

	Education and Human Studies				School of Medicine				Engineering and Natural Resource Sciences				F
	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max	
Listening													
2	10.54	2.07	4	14	11.21	2.75	0	14	9.44	2.48	0	14	35.14
1	9.95	2.13	0	14	10.71	2.19	4	14	8.90	2.02	2	14	48.85
Vocabulary and Grammar													
2	20.12	3.71	9	28	22.72	4.24	9	30	16.67	4.35	0	28	138.79
1	19.95	3.79	10	30	22.57	4.39	1	30	16.90	4.13	6	28	122.52
Reading													
2	13.01	2.46	3	16	13.92	2.55	5	16	11.32	3.01	0	16	61.11
1	11.75	2.47	4	16	13.55	2.37	4	16	10.62	2.68	0	16	81.60

Notes. 1. = The score of the test that was administered in April 2005. 2 = The score of the test that was administered in February 2006. Max = Maximum score. Min = Minimum score. n of Education and Human Studies = 207. n of School of Medicine = 185. n of Engineering and Natural Resource Sciences = 365. $df = 756$. $p < .001$.

It may be worth examining if the score increases were significant in each division. Because similar tendencies were observed in all the three departments,

it could be concluded that the program was not successful in the area of vocabulary and grammar.

Table 3: Paired Samples Statistics

	Gain	SD	t	df
Education and Human Studies				
Listening	0.59	2.28	3.72***	206
Vocabulary and grammar	0.16	3.28	0.72	206
Reading	1.26	2.39	7.56***	206
Total	2.01	4.98	5.80***	206
Engineering and Natural Resources				
Listening	0.50	3.00	2.28**	184
Vocabulary and grammar	0.15	3.59	0.57	184
Reading	0.37	2.33	2.18**	184
Total	1.03	6.15	2.27**	184
School of Medicine				
Listening	0.50	3.00	0.94	2.28
Vocabulary and grammar	0.15	3.59	0.67	0.57
Reading	0.37	2.33	0.71	2.18
Total	1.03	6.15	1.92	2.27

Note. * = $p < .05$. ** = $p < .01$. *** = $p < .001$. (two-tailed).

The Analysis of the 2006 April Test Scores

Because the data of the 2006 test were limited to the one that was gained from its first administration in the April of 2006, the presentation of the data is inevitably

descriptive. Note that as stated at the beginning of this paper, the scores were marked by the computer, and thus this time it was possible obtain reliability as well as other basic statistics (Table 4).

Table 4 : Descriptive Statistics for the 2006 - 2007 EAP Course Evaluation

	Minimum	Maximum	Mean	SD	Reliability ()
Listening	22	100	60.16	14.17	0.557
Vocabulary	10	50	33.39	8.04	0.609
Grammar	5	50	29.48	8.06	0.753
Reading	10	100	55.09	15.80	0.704
Total	93	300	178.13	38.00	0.876

Note. $n = 897$.

Basic statistics are provided by breaking down them by departments in Table 5, so the test scores of the future students may be compared with the present data. Incidentally, the test scores again indicate that the proficiency levels were significantly different between

three departments. Post Hoc test (the Scheffe test) further indicates that the scores were higher in School of Medicine, Faculty of Education and Human Studies, and Faculty of Engineering and Natural Resource Sciences in this order.

Table 5 : Basic statistics of the 2006 Placement Test with ANOVA results

	Education and Human Studies				School of Medicine				Engineering and Natural Resource Sciences				F
	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max	
Listening	62.33	14.13	29	100	69.61	14.71	40	100	55.12	11.40	22	100	93.07
Vocabulary	34.02	6.98	21	50	41.54	6.52	26	50	29.63	6.26	10	50	237.62
Grammar	30.00	6.40	15	50	37.88	7.98	5	50	25.66	5.68	11	45	255.19
Reading	57.24	12.56	21	100	70.73	16.32	34	100	47.42	11.01	10	79	239.45
Total	183.58	29.64	120	274	219.76	35.56	146	300	157.82	25.03	93	239	330.32

Notes. n of total = 897. n of Education and Human Studies = 224. n of School of Medicine = 201. n of Engineering and Natural Resource Sciences = 472. $p < .001$.

It may be also worth noting here that in 2006 one advanced course was prepared for the groups of students from Faculty of Education and Human Studies and from School of Medicine (Nursing), and two advanced courses were prepared for the students of Faculty of Engineering and Natural Resource Sciences. The basic statistics are presented in Tables 6, 7, and 8,

so it may show how the scores of the advanced groups of students were different from those of regular classes. Note that a total of twenty-one classes are taught by different teachers, though there were cases where one teacher was teaching two classes.

The scores of the advanced groups of students were obviously higher than those of the other groups of

Table 6 : Basic Statistics for All Classes (Total)

Total (n = 897)	Listening	Vocabulary	Grammar	Reading	Total
Mean	60.16	33.39	29.48	55.09	178.13
SD	14.17	8.04	8.06	15.80	38.00
Median	59.00	34.00	29.00	53.00	172.00
Grouped Median	58.45	32.70	28.42	52.85	172.26
Minimum	22.00	10.00	5.00	10.00	93.00
Maximum	100.00	50.00	50.00	100.00	300.00
Range	78.00	40.00	45.00	90.00	207.00
Kurtosis	0.46	-0.41	0.22	0.69	0.33

Table 7 : Basic Statistics for All EAP Classes (Faculty of Education and Human Studies and School of Medicine)

		Education and Human Studies (Regular)					Medicine (Nursing)		<i>Advanced</i>	Medicine	
Class ID		A	B	C	D	E	F	G	J	H	I
n		35	40	37	47	37	47	48	40	48	46
Listening	Mean	51.89	53.10	53.62	65.51	63.35	69.00	63.29	81.08	84.10	66.20
	SD	8.59	9.68	6.95	12.66	9.63	13.60	9.75	11.59	12.48	9.56
	Median	54.00	54.00	54.00	64.00	64.00	70.00	64.00	78.00	89.00	64.00
	Min	29.00	29.00	40.00	35.00	50.00	45.00	45.00	59.00	54.00	40.00
	Max	70.00	78.00	70.00	100.00	100.00	100.00	89.00	100.00	100.00	89.00
	Range	41.00	49.00	30.00	65.00	50.00	55.00	44.00	41.00	46.00	49.00
Vocab.	Kurtosis	0.73	0.83	0.82	0.60	4.71	-0.33	-0.25	-0.83	-0.57	0.24
	Mean	30.09	28.63	31.19	36.43	37.43	36.04	37.94	42.83	46.96	44.30
	SD	4.40	4.42	5.23	6.22	5.80	5.31	5.70	5.33	3.98	4.74
	Median	31.00	28.00	31.00	37.00	37.00	37.00	37.00	45.00	50.00	45.00
	Min	21.00	21.00	21.00	24.00	26.00	24.00	26.00	31.00	37.00	28.00
	Max	40.00	37.00	45.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Grammar	Range	19.00	16.00	24.00	26.00	24.00	26.00	24.00	19.00	13.00	22.00
	Kurtosis	-0.02	-0.60	0.18	-0.08	0.25	0.96	0.21	-0.67	0.07	1.74
	Mean	25.86	25.75	26.76	32.47	31.30	32.53	34.27	39.35	45.56	38.91
	SD	3.99	4.42	4.63	5.55	5.68	4.59	5.61	6.07	4.55	7.91
	Median	27.00	25.00	27.00	31.00	31.00	31.00	34.00	40.00	45.00	38.00
	Min	15.00	18.00	15.00	18.00	18.00	23.00	25.00	25.00	34.00	5.00
Reading	Max	34.00	36.00	34.00	50.00	45.00	45.00	50.00	50.00	50.00	50.00
	Range	19.00	18.00	19.00	32.00	27.00	22.00	25.00	25.00	16.00	45.00
	Kurtosis	0.61	-0.70	0.28	1.93	0.61	0.17	0.03	-0.56	-0.04	6.19
	Mean	51.83	46.85	48.08	61.43	61.27	59.23	62.94	79.88	88.90	68.46
	SD	8.21	8.44	8.82	8.56	8.40	11.41	6.78	11.24	10.89	12.09
	Median	53.00	46.00	50.00	61.00	61.00	61.00	61.00	79.00	90.00	72.00
Total	Min	28.00	28.00	21.00	42.00	46.00	34.00	53.00	61.00	66.00	34.00
	Max	66.00	61.00	66.00	79.00	79.00	90.00	79.00	100.00	100.00	90.00
	Range	38.00	33.00	45.00	37.00	33.00	56.00	26.00	39.00	34.00	56.00
	Kurtosis	0.73	-0.58	1.23	-0.17	-0.53	1.05	0.18	-0.93	-0.48	0.43
	Mean	159.66	154.33	159.65	195.83	193.35	196.81	198.44	243.13	265.52	217.87
	SD	11.80	12.32	12.57	14.12	13.29	14.35	12.77	14.22	17.05	20.13
Total	Median	161.00	157.00	161.00	194.00	192.00	194.00	198.00	239.50	259.50	222.00
	Min	124.00	120.00	120.00	175.00	175.00	174.00	174.00	226.00	244.00	160.00
	Max	174.00	172.00	174.00	224.00	221.00	225.00	226.00	290.00	300.00	243.00
	Range	50.00	52.00	54.00	49.00	46.00	51.00	52.00	64.00	56.00	83.00
	Kurtosis	1.53	0.60	0.98	-0.79	-0.85	-1.07	-0.63	2.82	-0.97	0.82

Table 8 : Basic Statistics for All EAP Classes - continued (Faculty of Engineering and Natural Resource Sciences)

		Faculty of Engineering and Natural Resource Sciences									<i>Advanced</i>	
Class ID		K	L	M	N	O	P	Q	R	S	<i>T</i>	<i>U</i>
<i>n</i>		38	40	40	41	45	48	47	47	45	38	43
Listening	Mean	46.42	45.65	46.13	45.49	55.93	57.83	57.79	56.74	55.47	67.03	69.67
	SD	9.43	7.92	8.59	8.23	7.04	7.48	9.65	7.60	5.52	10.22	9.83
	Median	45.00	45.00	50.00	45.00	54.00	59.00	59.00	59.00	54.00	67.00	70.00
	Min	29.00	29.00	22.00	29.00	40.00	40.00	40.00	40.00	40.00	40.00	50.00
	Max	70.00	64.00	64.00	64.00	70.00	78.00	78.00	78.00	64.00	89.00	100.00
	Range	41.00	35.00	42.00	35.00	30.00	38.00	38.00	38.00	24.00	49.00	50.00
Vocab.	Kurtosis	0.09	0.04	0.69	-0.22	0.21	0.30	-0.59	0.25	0.23	0.99	1.45
	Mean	25.95	26.30	25.20	25.00	31.20	30.38	29.06	29.47	30.53	36.71	35.60
	SD	4.72	4.43	4.97	5.34	5.93	5.99	5.05	4.73	4.34	5.42	5.28
	Median	26.00	26.00	26.00	26.00	31.00	29.50	28.00	28.00	31.00	37.00	37.00
	Min	16.00	19.00	10.00	13.00	19.00	19.00	16.00	19.00	19.00	26.00	21.00
	Max	34.00	34.00	37.00	34.00	45.00	45.00	37.00	40.00	40.00	50.00	50.00
Grammar	Range	18.00	15.00	27.00	21.00	26.00	26.00	21.00	21.00	21.00	24.00	29.00
	Kurtosis	-0.42	-1.02	1.91	-0.67	-0.37	0.52	0.48	-0.01	1.12	0.16	1.45
	Mean	21.37	20.95	21.88	22.05	26.44	27.46	25.91	25.68	26.91	32.84	29.98
	SD	5.18	4.14	3.99	4.32	4.37	4.51	4.42	3.96	4.75	5.77	4.34
	Median	23.00	21.50	20.00	23.00	27.00	27.00	27.00	25.00	27.00	32.50	29.00
	Min	11.00	11.00	15.00	11.00	18.00	18.00	18.00	18.00	18.00	23.00	23.00
Reading	Max	34.00	27.00	31.00	29.00	34.00	40.00	36.00	34.00	36.00	45.00	40.00
	Range	23.00	16.00	16.00	18.00	16.00	22.00	18.00	16.00	18.00	22.00	17.00
	Kurtosis	0.00	-0.14	0.04	-0.25	-0.86	1.44	-0.44	-0.40	-0.54	-0.23	-0.33
	Mean	38.18	36.88	38.05	39.80	50.40	47.92	48.19	49.47	50.31	61.63	58.98
	SD	7.69	9.59	8.00	9.58	6.32	7.65	7.38	6.87	7.08	9.22	7.91
	Median	38.00	38.00	38.00	42.00	50.00	50.00	50.00	50.00	50.00	61.00	57.00
Total	Min	21.00	10.00	10.00	10.00	34.00	34.00	28.00	34.00	38.00	46.00	46.00
	Max	50.00	53.00	53.00	53.00	66.00	66.00	61.00	61.00	66.00	79.00	79.00
	Range	29.00	43.00	43.00	43.00	32.00	32.00	33.00	27.00	28.00	33.00	33.00
	Kurtosis	0.15	1.60	2.99	0.88	0.75	-0.30	0.19	-0.37	-0.33	-0.70	0.30
	Mean	131.92	129.78	131.25	132.34	163.98	163.58	160.96	161.36	163.22	198.21	194.23
	SD	12.54	14.49	11.84	13.36	7.99	9.27	8.83	8.89	9.02	14.78	12.22
Total	Median	135.50	133.00	135.00	137.00	163.00	164.00	158.00	162.00	162.00	195.50	191.00
	Min	93.00	96.00	101.00	98.00	149.00	148.00	148.00	148.00	148.00	180.00	180.00
	Max	147.00	147.00	145.00	146.00	178.00	179.00	178.00	179.00	178.00	239.00	229.00
	Range	54.00	51.00	44.00	48.00	29.00	31.00	30.00	31.00	30.00	59.00	49.00
	Kurtosis	2.32	-0.48	0.04	0.07	-0.87	-1.16	-1.14	-1.26	-1.19	1.85	0.56

students. Incidentally, the scores of H and I Classes (School of Medicine) were even higher. The data confirmed the widespread perception shared by the non-English teaching staff on campus that the students of School of Medicine are relatively proficient in English.

One other thing that should be noticed is that the range or the degree of difference between the maximum and the minimum scores tended to be higher in the advanced classes. This means that there was a large difference between the students of the lowest scores and those with the highest scores in the class, although standard deviations, another indicator of dispersion, did not so greatly differ. This indicates in turn that the teachers of the advanced groups need to take account of individual differences of the students to

an even greater extent in advanced classes than in regular classes.

However, this result is somewhat ironical, because the advanced classes were prepared so they might help students who are proficient in English improve their English ability even more by creating a relatively homogeneous group of students. However, this turned out to be too idealistic a goal to achieve. There is not any quick solution to this problem, but it is one thing that the teaching staff needs to keep in mind when dividing students into classes of different proficiency levels. In an attempt to place students into appropriate classes, it is important to take into account other factors than test scores, such as overseas experiences, results of entrance examinations, and so forth, with the

understanding that the scores of one-shot examination are not sufficient to place students into appropriate levels. It is also advisable that students be given a chance to move to a more appropriate class once it is found that they have been placed in an inappropriate class.

Conclusion

This paper presented and discussed the results of analyzing the scores of the three tests that were administered during the period of 2005 and 2006 academic years. The major purpose of the tests was to obtain the information, on the basis of which to place students into appropriate levels of classes for the English for Academic Purposes Program at Akita University. However, the data were also used to evaluate the effectiveness of the program.

To gain more useful results, it may be necessary to do the following in the future more fruitful research. First, it is important to gather data at the beginning and of the end of the course by using equivalent tests. Unless it is possible to do so, or in addition to this, it is desirable to continue to gather data by administering equivalent tests over the years. By so doing, it becomes possible to plot changes in the structure and content of the English ability of the students who enter Akita University each year. Third, the purpose of the EAP program involves improving not only English skills per se, but also general academic skills, such as presentation, note-taking, critical reading, and so forth.

These skills could not be tested, so some sort of measurement device needs to be developed which provides information that will be useful for assessing these skills.

Despite several limitations, however, the present study made several important findings. Amongst a variety of those, the most important is that the program seems to have been successful in helping students improve English ability especially in listening and reading. However, it should also be noted that the curriculum seems to have been not as successful as it might have been expected in the area of vocabulary and grammar. This may be because that the program does not involve independent components that are aimed at these skills. It may be necessary then to teach vocabulary and grammar explicitly as separate activities in the classroom.

Finally, it should be noticed that test scores reveal only a limited aspect of the effectiveness of the program. In order to examine all the details of the influence of the program on the students, it is advisable to incorporate observations, interviews, and other qualitative and or ethnographic approaches.

References

- Henning, G. (1987). *Guide to Language Testing*. Rowley, Mass.: Newbury House.
- Watanabe, Y. (2004). Does English Ability Really Matter? - Validating the Final Grades of University EFL Courses. 『秋田大学教養基礎教育研究年報』、第 6 号, pp. 19-28.