Mapping Student Motivation:
A Study of Undergraduate Japanese EFL Engineering Majors

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This study examines the relationship between attitude and motivation to learn English and English proficiency levels as measured by the TOEIC Bridge test among 244 Toyo University engineering students. Data reduction through factor analysis indicated four factors: Positive Attitude toward Learning English, Language Anxiety, International Posture, and Effort. A one-way ANOVA was conducted; the independent variable was English proficiency and the dependent variable was each affective questionnaire response. The results show that high and middle proficiency students tend to have a more positive attitude toward English learning and interest in foreign cultures, which is described as "international posture" (Yahima, 2002). They also report making greater efforts to improve their English abilities than low proficiency students, while the degree of anxiety shows no significant differences among all three proficiency levels.

Key words: language learning, affective factors in L2 acquisition, attitudes towards foreign languages, EFL motivation, foreign language anxiety

Early second language acquisition researchers have proposed that language aptitude plays a major role in language acquisition. However, when Gardner and Lambert (1959) conducted the first study measuring variables thought to be part of the socio-educational model of second language acquisition, many researchers' attention shifted to learners' psychological traits such as attitude, motivation, and anxiety. Most researchers agree that favorable attitudes toward language learning, high motivation, and low anxiety lead to higher L2 proficiency. However, the influence of these psychological traits may vary according to the context in which learners learn the target language. For example, Gardner focuses on integrative motivation as a main factor in

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an ESL context, while Dörnyei (1990) argues that in an EFL context instrumental motivation is more important.

What kind of influence, then, do L2 affective variables exert on Japanese learners of English in a university EFL context? There has been much research conducted on this population, but the influences seem to vary according to the age, major, and proficiency of the participants. In this study, I investigate the attitude and motivation toward English learning among undergraduate engineering majors at Toyo University.

Literature Review

Motivation

Gardner and Smythe (1975) report that the major affective factor influencing L2 achievement is motivation. Gardner and MacIntyre (1993) describe a motivated individual as "one who wants to achieve a particular goal, denotes considerable effort to achieve this goal, and experiences satisfaction in the activities associated with achieving this goal" (p. 3). Dörnyei (2005) argues that motivation is so important in second language acquisition that a learner who possesses high aptitude but has insufficient motivation cannot acquire an L2 successfully; on the other hand, he contends that "high motivation can make up for considerable deficiencies both in one's language aptitude and learning conditions" (Dörnyei, 2005, p. 65). In order to measure learners' motivation, Gardner (1985) developed a multicomponent motivation questionnaire called the Attitude/Motivation Test Battery (AMTB). This is considered an effective measure of motivation and has been used by researchers all over the world (Dörnyei, 2005).

Gardner emphasizes the importance of integrative motivation in L2 acquisition (Gardner, 1985), whereas other researchers argue that instrumental motivation is also important, especially in EFL contexts (Clément, Dörnyei, & Noels, 1994; Dörnyei, 1990). Yashima (2002) agrees with Dörnyei (1990), noting that Japanese students usually have little contact with English speakers in their daily lives and do not have a clear affective response to specific L2 groups. She therefore includes a factor known as International Posture in her model, which she defines as an "interest in foreign or international affairs, willingness to go overseas to stay or work, readiness to interact with intercultural partners, and, one hopes, openness or a non-ethnocentric attitude toward different cultures, among others" (p.57). In her structural equation model, International Posture had significant paths to L2 Learning Motivation and to Willingness to Communicate (Yashima, 2002).

Recently, more studies have been conducted investigating Japanese university students' L2 motivation in a Japanese EFL context. Ogane and Sakamoto (1997) examined how the English proficiency of 110 Japanese university students as measured by the listening, structure, and vocabulary sections of the CELT correlated with self-reported motivation to learn English. They found a strong correlation with Motivation (standardized coefficient = .46).

Yamashiro and Sasaki (1999a) investigated 155 students at Heisei International University and reported

that Self-reported Effort and Study Habits were weakly correlated with English proficiency as measured by the CELT and a cloze-test (Effort $r = .19$, Study habits $r = .23$), while Anxiety was negatively correlated with English proficiency ($r = -.25$).

Yamashiro and Sasaki (1999b) investigated 141 Saitama Junior College students majoring in English and discovered five factors that significantly correlated with English proficiency as measured by the CELT and a cloze-test; Attitudes toward English ($r = .21$), Self-reported Effort ($r =.22$), Native Speaker & Teacher Influences ($r = .18$), External Influences ($r = -.26$), and Anxiety ($r = -.17$). Yashima (2002) reveals that communicative competence was significantly correlated with a composite motivation variable made up of motivational intensity and desire to learn English ($r = .41$, $p <.01$).

Suzuki (2009) examined 444 students majoring in engineering at the National College of Technology. Pearson correlation coefficients were calculated between self-reported Motivation scales and English proficiency as measured by the English Proficiency Screening Test developed by the author based on the STEP-Eiken test, which consists of multiple-choice listening and reading items. No significant correlation between English proficiency and Instrumental Motivation was found. However, Integrative Motivation showed weak correlation among the second-year students ($r = .18$, $p < .05$) and moderate correlation among the third-year students ($r = .46$, $p < .01$).

Many of the studies mentioned above indicate that motivation plays a major role in language acquisition. By contrast, Berwick and Ross (1989) argue that once students get into university, they are left with "a motivational vacuum" and the authors found little connection between the motivation to learn English and English proficiency.

Language Anxiety

Language anxiety is thought to be another important variable influencing learners' L2 learning and performance. Richards and Schmidt (2002) define foreign language anxiety as "subject feelings of apprehension and fear associated with language learning and use" (p. 285). Horwitz, Horwitz, and Cope (1986) developed a measure known as the Foreign Language Classroom Anxiety Scale (FLCAS) to assess anxiety specific to foreign language learning. Language anxiety has often been investigated in the context of its relationship to L2 proficiency. Most studies have suggested that language anxiety has a negative correlation with L2 proficiency. For example, Horwitz (1991) found that the correlation between the FLCAS and the final course grade was $r = -.49$, $p = .003$ for 35 students in Spanish classes, and $r = -.54$, $p = .001$ for 32 students in French classes. Aida (1994) examined 96 students in beginning Japanese classes at the University of Texas. The students' FLCAS scores were compared with their final course grades and the results showed that the correlation coefficient between anxiety and course grade was $r = -.38$, $p < .01$, which suggests that higher anxiety is moderately associated with lower course grades. Saito and Samimy (1996) examined 257 students

(134 beginning, 79 intermediate, and 44 advanced-level learners of Japanese) at the University of Texas. The results revealed that Language Class Anxiety was the best predictor of the final grades of both intermediate and advanced level students (intermediate: $R^2 = .17$, $p < .001$; advanced: $R^2 = .22$, p < .004) and that anxiety appeared to exert a negative influence on learners' performance.

Brown, Robson, and Rosenkjar (2001) report on facilitating anxiety in their examination of 320 Japanese university students, who were divided into three proficiency groups according to the results of a cloze test: high, middle, and low. The scores on the FLCAS and on the English Class Anxiety scales for each group indicate that the high proficiency group was more anxious about their English study than the other groups. Takahashi (2003) investigated the relationship between language anxiety and English proficiency as measured by the cloze test and the C-test with 71 Japanese university students. She reported the two kinds of anxieties: debilitating anxiety that has detrimental effects on language learning and facilitating anxiety that helps language acquisition. The results showed that the former type of anxiety was negatively correlated with proficiency ($r = -.57$, $p < .01$), whereas the latter type was positively correlated with proficiency ($r = .32$, $p < .01$).

Some studies found no relationship between English proficiency and anxiety. For example, Falout (2004) dealt with 75 students in supplementary English classes and calculated Pearson correlation coefficients between the classroom English tests and the FLCAS. The results show that there was no significant correlation between the FLCAS and the pre-test ($r = .05$, $p > .05$) and the post-test ($r = .06$, $p > .05$). Tajima (2007) examined 59 Japanese university students' language anxiety and found that the levels of anxiety did not differ among students of different class levels.

Research Questions

As shown above, the attitude, motivation, and anxiety of language learners appear to vary according to context. Therefore, in order to investigate L2 affective factors of engineering students at Toyo University, two research questions are examined in this study. The first research question is, "What psychological traits can be found among this population sample?" The second research question is, "Are there any differences in the extent that L2 affective variables seem to influence students with different levels of English proficiency as measured by the TOEIC Bridge test?"

Method

Participants

The participants were 248 first-year Japanese students (214 males and 34 females) majoring in engineering at Toyo University. All the participants were Japanese nationals and no returnees were included in this study. These students are required to take two 90-minute EFL English classes a week during their first

undergraduate year. The students were divided into proficiency levels in April, as determined by the TOEIC Bridge test. The participants of this study were from the English classes of three different levels; 60 (35 males and 15 female) high proficiency students, 99 (87 males and 13 females) middle proficiency students, and 89 (83 males and 6 females) low proficiency students.

Instruments

A 30-item fixed-response questionnaire was used to measure the participants' attitudes and motivation toward learning English. This questionnaire was based on Gardner's (1985) Attitude/Motivation Test Battery (AMTB) and Horwitz et al.' s (1986) Foreign Language Classroom Anxiety scale (FLCAS). Moreover, some items were adapted from Gardner, Tremblay, and Masgoret (1997), Yashima (2002), Irie (2005), and Sick (2006). The original Japanese version of the questionnaire is in Appendix A and its English translation (along with the mean scores and standard deviations) appears in Appendix B. The participants answered each question using a six-point Likert scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Slightly Agree, 5 = Agree, and 6 = Strongly Agree.

The second instrument used in this research was the TOEIC Bridge test. This test consists of 50 listening and 50 reading multiple choice items. The score ranges from 20 to 180 and the standard error of measurement of this instrument is reported to be ±4 points (ETS, 2008, p. 13). The students had 60 minutes to complete this 100-item test.

Procedure

The students in my English classes who voluntarily agreed to participate in the study filled in the questionnaire listed in Appendix A. Among those who were taking my classes in the spring semester 163 students filled in the questionnaire in May and among those in my fall semester classes 85 students did so in October in 2009. The data were subjected to factor analysis using SPSS 18.0 to ascertain the first research question. After most salient variables were ascertained from the first analysis, each variable was compared among the three different proficiency groups using a one-way ANOVA in order to answer the second question. The alpha level for statistical significance was set at .05.

Preliminary Analysis

The questionnaire data were collected from 248 participants, but data submitted by four participants were incomplete and consequently deleted. Data from 244 participants (210 males and 34 females) comprising 60 (35 males and 15 female) high proficiency students, 97 (85 males and 13 females) middle proficiency students, and 87 (81 males and 6 females) low proficiency students were analyzed.

Before conducting the main analysis, I checked to see if the proficiency of the three groups of students

was significantly different by comparing the mean scores of the TOEIC Bridge tests using ANOVA. One student in the low proficiency group did not take the test, so he was deleted from the analysis. The test scores of the 60 students in the "high proficiency" group had a mean score of 140.20 and a standard deviation of 4.10. The 97 students in the "middle proficiency" group exhibited a mean of 121.75 and *SD* of 3.42. The "low proficiency" group consisted of 86 students with a mean score of 101.12 and *SD* of 6.24.

The Levene's homogeneity-of-variance test - an interfential statistic that compares the variances of different samples - was significant, so the normality assumption for test scores was violated. As a result, the Dunnett's C test - a measure of cross-sample variance that doesn't assume equivariance - was used as a post hoc test. As Table 1 indicates, the ANOVA was significant, so follow-up tests were conducted to evaluate pairwise differences among the means. The Dunnet's C test revealed that the mean scores of the three groups were significantly different.

Table 1. *ANOVA summary of the English Proficiency for Test Scores*

Source	df	SS	MS	F	η^2
Between groups	2	55206.50	27603.25	1218.58*	.91
Within group	240	5436.50	22.65		
Total	242	60643.00			

*$p < .01$

Results

First, descriptive analysis was conducted for questionnaire items. Appendix B reveals the mean and standard deviation for each questionnaire item. The items with high mean scores were Items 4 ($M = 4.77$) and 5 ($M = 4.85$). This seems to indicate that many students believed in the importance of English and felt a need to improve their English abilities. The item with the lowest mean score was Item 27 ($M = 2.52$). Although students avowedly understood the importance of English, not many indicated that they studied English outside of their English classes.

Now let us consider the first research question, "What psychological traits can be found among this population sample?" This question was investigated by analyzing the dimensionality of the 30 questionnaire items using a principal axis factor analysis. Based on the scree plot, four factors were rotated using a varimax rotation (Brown, 2010, pp.19-23). Items 8, 9, and 28 loaded below .04 on all the factors; therefore, these three items were deleted. Item 18 loaded on two factors: Factor 1 (.467) and Factor 2 (.544); thus, this item was also deleted. After deleting these four items, a factor analysis was conducted again with the remaining 26 items. The results are shown in Table 2.

Table 2. *Factor Loadings from a Principal-Axis Factoring of the Questionnaire Items*

	Factor loadings				
	1	2	3	4	communality
1	**.816**	-.092	.218	.087	.729
2	**.704**	-.062	.262	.206	.610
3	**.771**	.017	.235	.161	.676
4	**.804**	-.050	.197	.142	.709
5	**.636**	-.100	.228	-.075	.472
6	**.667**	-.007	.158	.054	.473
7	**.466**	.041	.049	.339	.336
10	-.001	**.725**	-.048	-.011	.528
11	.001	**.802**	.023	-.087	.651
12	-.068	**.661**	.052	-.164	.471
13	.028	**.499**	.004	.049	.252
14	-.127	**.703**	-.137	.156	.553
15	-.036	**.515**	-.116	.140	.300
16	-.043	**.598**	-.146	-.037	.382
17	.201	-.054	**.705**	.231	.593
18	.250	-.057	**.646**	.032	.485
19	.157	-.123	**.760**	.157	.642
20	.235	-.111	**.710**	.092	.580
22	.249	-.019	**.726**	.268	.662
23	.164	-.052	**.731**	.149	.586
24	.296	-.056	.391	**.448**	.445
26	-.022	.029	.097	**.616**	.390
27	.015	.101	.139	**.752**	.595
28	.080	.007	.251	**.717**	.584
29	.230	.012	.144	**.752**	.640
30	.256	-.073	.070	**.541**	.368

Note. $N = 244$. Boldface indicates factor loadings higher than .40.

The first factor accounts for 15.3% of the item variance, with seven items loading on this factor. Specifically, these are: Item 1 "I absolutely believe that English should be taught at university," Item 2 "I want to improve my English ability while I am a university student," Item 3 "I feel that I need to acquire English," Item 4 "Not only literature students but also engineering majors should improve their English abilities," Item 5 "English is necessary in today's international world," Item 6 "English is a must for me to succeed in the future," and Item 7 "I study English because I think it will be useful in getting a good job." These items are

thought to indicate students' positive attitude toward learning English. Therefore, Factor 1 was labeled "Positive Attitude toward Learning English."

The second factor, which consists of seven items, accounts for 14.1% of the item variance. These items are: Item 10 "I tremble at the thought that I'm going to be called on in English class," Item 11 "I worry about my English class exams," Item 12 "I worry about the consequences of failing my English class," Item 13 "The more I study English, the more confused I get," Item 14 "I get more nervous in English class than in other classes," Item 15 "It embarrasses me to volunteer answers in my English class," and Item 16 "I feel overwhelmed by the number of rules I have to learn to acquire English." These items relate to anxiety when learning English in class, so Factor 2 was labeled "Language Anxiety."

The third factor, which accounts for 11.8% of the item variance, consists of six items: Item 17 "I would like to study abroad if possible," Item 19 "I have a favorable impression toward English speaking people such as Americans and the British," Item 20 "I want to make friends with English speaking people," Item 21 "I am interested in the cultures of English speaking countries," Item 22 "I would like to learn about the English-speaking world," and Item 23 "I would like to have a job in which I work overseas frequently." These items represent an interest in English culture and English-speaking people. Thus, Factor 3 was labeled "International Posture."

The fourth factor–comprising 11.5% of the item variance–includes these six items: Item 24 "I wish we had more English classes," Item 25 "Compared to my peers, I think I study English relatively hard," Item 26 "I spend a lot of time studying English," Item 27 "I study English on my own outside of my English coursework.," Item 29 "I work hard to improve my English ability," and Item 30 "I study English for an English proficiency test such as the STEP-Eiken or TOEIC." These items are thought to represent students' efforts to improve their English abilities, so Factor 4 was labeled "Effort."

After this, the Pearson correlation coefficients of the four affective variables were computed in order to investigate how these variables are related to each other. Using the Bonferroni approach to control for a Type I error across six correlations, a p value of less than .008(.05 / 6) was required for significance (Green & Salkind, 2004). The results of the correlation analyses are presented in Table 3, which show that students with a positive attitude toward learning English tend to report making more efforts to improve their English. They also appear to have a higher "international posture." However, anxiety did not display any significant relationship with the other variables.

Table 3. *Correlations among Four Self-Reported Variables in This Study*

	1	2	3	4
1. Positive Attitude	− −			
2. Language Anxiety	−.10	− −		
3. International Posture	.49*	−.15	− −	
4. Effort	.39*	−.03	.43*	− −

*$p < .008$

Now let us turn our attention to the second research question, "Are there any differences in the extent that L2 affective variables seem to influence students with different levels of English proficiency as measured by the TOEIC Bridge test?" This question was examined by looking at each variable and its relation to the three proficiency levels. Means and standard deviations of each variable for three student proficiency levels are presented in Table 4. An ANOVA summary for each variable is presented in Table 5.

Table 4. *Means and Standard Deviations of each Variable for Three Proficiency Levels*

	Low		Mid		High	
Variables	*M*	*SD*	*M*	*SD*	*M*	*SD*
Positive Attitude	28.99	7.51	32.25	6.95	34.42	4.63
Language Anxiety	26.89	7.37	25.09	6.96	24.13	6.48
International Posture	16.86	6.43	21.07	6.54	20.75	7.50
Effort	15.51	5.92	17.69	5.33	18.25	5.43

Table 5. *ANOVA Summary for each Variable*

Variable and Source	*SS*	*MS*	*F* (2,241)	$\eta 2$
Positive Attitude				
Between groups	1109.92	554.96	12.45*	.09
Within groups	10745.63	44.59		
Language Anxiety				
Between groups	295.05	147.52	3.01	.02
Within groups	11807.95	49.00		
International Posture				
Between groups	333.69	166.85	5.32*	.04
Within groups	7485.72	31.06		
Effort				
Between groups	938.89	469.45	10.31*	.08
Within groups	10976.09	45.54		

*$p < .01$

With regard to Factor 1 (Positive Attitude toward Learning English), the ANOVA was significant. Follow-up tests were conducted to evaluate pairwise differences among the means. Because the data passed the Levene's test of homogeneity, I conducted post hoc comparisons via the Tukey test, a test that assumes equal variances among the three groups. This test indicated that there were significant differences in the means between the low and middle groups, or between the low and high proficiency groups. However, no significant difference was found between the middle and high groups.

Secondly, the ANOVA was not significant for the Language Anxiety data, suggesting that anxiety had no relation to student proficiency levels.

Third, the ANOVA conducted for the International Posture data was significant. The data passed the homogeneity test. When looking at the Tukey results it became clear that there were significant differences between the low and middle groups, and between the low and high groups. However, the middle and high groups were not significantly different from each other.

Finally, concerning Effort, the ANOVA was significant. As the data passed the homogeneity test, the Tukey results were examined and found to display significant differences in the means between the low and middle groups, and between the low and high groups, but no significant difference between the middle and high groups.

Discussion

The present study examined 244 engineering students' L2 affective variables and their relation to three student proficiency levels: low, middle, and high as measured by the TOEIC Bridge test. Four factors were extracted from the questionnaire: Positive Attitude toward Learning English, Language Anxiety, International Posture, and Effort. It was found that students having positive attitudes toward learning English also appeared to be more internationally oriented and tended to make greater efforts to improve their English abilities. However, according to Pearson correlation coefficient results, the participants' anxiety did not appear to have any significant relation to their positive attitude, international posture, or effort.

Based on these results, the relationship between the variables and student proficiency levels was examined. The findings showed that middle and high proficiency students did not differ in all the variables, but the upper two groups of students did differ significantly from the low proficiency students in terms of three key factors: positive attitude, international posture, and effort. In other words, compared to low proficiency students, the students with middle and high proficiency levels tended to believe more strongly that English is important in today's internationalized society. They also tended to feel a keener need to improve their English abilities and espoused a greater interest in English-speaking cultures and peoples. The respondents in these two groups also tend to express more interest in studying or working abroad in the future. Therefore, they report that they study English relatively hard. Because Item 28, "During English

classes I am absorbed in what is taught and concentrate on my studies," did not load on the Effort factor, the effort in this factor represents the effort that students report making outside of their English classes.

Unlike many other studies which report that anxiety exerts detrimental effects on language learning, and that low proficiency students tend to have higher anxiety (Aida, 1994; Horwitz, 1991; Saito & Samimy, 1996), this study does not show a significant relationship between anxiety and English proficiency levels. The participants in this study appear to have exhibited an equal level of anxiety. This result is similar to the findings obtained by Falout (2004) and Tajima (2009), which reveal no significant relation between anxiety and proficiency.

Conclusion

The findings of this study show that higher proficiency students tend to have a more positive attitude toward learning English. They also tend to be more internationally oriented, and make more efforts to improve their English than lower proficiency students. However, students at all the proficiency levels seem to have equal degrees of anxiety, and anxiety did not appear to correlate strongly with the other variables in this study.

However, it should be noted that the participants in this study were all from the same university, so the results should be generalized with caution to other contexts. Moreover, as the English proficiency of most of the participants were at low to intermediate levels, the results may not be applicable to students with much higher or lower proficiency levels.

Despite these limitations, the present study suggests that a clear relation between respondents' avowed attitudes and motivation to learn English and their TOEIC Bridge test scores exists. In particular, the results relating to language anxiety - which differ from most previous studies - are very intriguing. Further research is needed to investigate the issue of language anxiety in more detail. Moreover, future studies should compare Engineering majors with other majors to ascertain whether or not there are any distinctive features of Engineering students' attitudes and motivation to learn English.

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Appendix A. Original Student Questionnaire

次の各質問について、あなた自身にどの程度当てはまるか、尺度上の該当する項目に〇をつけてください。

1	2	3	4	5	6
全くそう思わない	そう思わない	あまりそう思わない	ややそう思う	そう思う	強くそう思う

1. 大学で英語を学ぶのは当然だと思っている。
2. 大学在学中に英語の力をもっと伸ばしたいと思っている。
3. 自分の中で、英語を習得しなければならないという気持ちがある。
4. 文系の学生だけではなく、理系の学生も英語の力を伸ばす必要があると思う。
5. 英語は今日の国際社会で必要だと思う。

6.　将来成功するためには英語は必須である。

7.　英語ができると就職に有利なので、英語を勉強している。

8.　英語の勉強をするのは単位をとるためである。

9.　自分よりも他の学生の方が英語ができるといつも思っている。

10.　英語のクラスで、自分があてられることがわかると心配になる。

11.　英語のクラスの試験のことを考えると不安になる。

12.　英語の単位を落としてしまうのではないかと心配になる。

13.　英語の勉強をすればするほど、よりわからなくなってしまう。

14.　他のクラスよりも英語のクラスの方が、ずっと緊張してナーバスになる。

15.　英語のクラスで英語を自ら進んで話すなんて恥ずかしい。

16.　英語ができるようになるために、学ばなければならない規則の多さに圧倒されてしまう。

17.　できれば留学したいと思っている。

18.　ネイティブスピーカーと英語でコミュニケーションがとれるようになるので、英語の勉強は大切だと思う。

19.　英語圏の人々（アメリカ人やイギリス人など）に好印象を持っている。

20.　英語圏の人と友達になりたい。

21.　英語圏の文化に興味がある。

22.　英語に関する世界について学びたいと思う。

23.　将来、海外にひんぱんに行くような仕事に就きたい 。

24.　もっと英語の授業を増やして欲しい 。

25.　他の学生と比較して、私は英語を一生懸命勉強していると思う。

26.　英語の勉強に長時間費やしている。

27.　英語の授業の課題以外にも自分で英語を勉強している。

28.　英語の授業に集中し、熱心に取り組んでいる。

29.　英語の力を伸ばすために、一生懸命勉強している。

30.　英検や TOEIC などの検定試験のために英語を勉強している。

Appendix B. An English Translation of the Questionnaire Items with Means and Standard Deviations for the Entire Sample

Questionnaire Items	M	SD
1. I absolutely believe that English should be taught at university.	4.50	1.32
2. I want to improve my English ability while I am a university student.	4.57	1.27
3. I feel that I need to acquire English.	4.59	1.34
4. Not only literature students but also engineering majors should improve their English abilities.	4.77	1.29
5. English is necessary in today's international world.	4.85	1.16
6. English is a must for me to succeed in the future.	4.61	1.28
7. I study English because I think it will be useful in getting a good job.	3.74	1.37
8. I study English to get credits to graduate.	3.84	1.45
9. I keep thinking that my peers are better at English than I am.	4.51	1.44
10. I tremble at the thought that I'm going to be called on in English class.	3.87	1.49
11. I worry about my English class exams.	4.09	1.46
12. I worry about the consequences of failing my English class.	4.12	1.54
13. The more I study English, the more confused I get.	2.95	1.29
14. I get more nervous in English class than in other classes.	3.05	1.38
15. It embarrasses me to volunteer answers in my English classes.	3.65	1.46
16. I feel overwhelmed by the number of rules I have to learn to acquire English.	3.77	1.38
17. I would like to study abroad if possible.	2.70	1.40
18. Studying English is important to me because it will allow me to communicate with native speakers of English.	4.30	1.33
19. I have a favorable impression toward English speaking people such as Americans and the British.	3.73	1.34
20. I want to make friends with English speaking people.	3.70	1.53
21. I am interested in the cultures of English speaking countries.	3.62	1.49
22. I would like to learn about the English-speaking world.	3.07	1.43
23. I would like to have a job in which I work overseas frequently.	2.67	1.48
24. I wish we had more English classes.	2.76	1.30
25. Compared to other students, I think I study English relatively hard.	2.79	1.20
26. I spend a lot of time studying English.	2.64	1.21
27. I study English on my own outside of my English coursework.	2.52	1.35
28. During my English classes I am absorbed in what is taught and concentrate on my studies.	3.74	1.23
29. I work hard to improve my English ability.	3.19	1.20
30. I study English for an English proficiency test such as the STEP-Eiken or TOEIC.	3.15	1.45

理工学部生の英語習得に対する態度と動機について

岩本　典子＊

　本論文は、244 名の理工学部生の英語習得に対する態度や動機に焦点をあて、英語習熟度との関連を調べた。アンケートデータの因子分析の結果、「英語学習に対する積極的態度」、「言語不安」、「国際的志向性」、「努力」の４つの要因が抽出された。次に、それぞれの要因は、学生の英語習熟度（高、中、低）において違いがあるかどうかを調べた。分散分析の結果、中・高習熟度の学生と低習熟度の学生において、言語不安以外の３つの要因で有意の違いが見られた。すなわち、中・高習熟度の学生は、低習熟度の学生に比べて、英語学習に対してより積極的な態度を持ち、より国際的な文化や人々に関心があり、英語力を伸ばすためより努力をする傾向があることがわかった。また、習熟度に関係なく、理工学部生は同程度の言語不安を感じており、その言語不安は他の３つの要因との有意な関連を持たないことがわかった。

キーワード：言語習得、第二言語習得における情意要因、第二言語に対する態度、第二言語習得の動機、言語不安

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