

# How Language Learning Strategies affect English Proficiency in Japanese University Students

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## Abstract

The major purposes of this study were (a) to explore which kinds of learning strategies are used by Japanese university students, (b) to determine how language proficiency level relate to the use of language-learning strategy, (c) to examine if there is a difference in strategy use associated with gender, and (d) to offer implications for instruction in a Japanese university classroom.

The self-report questionnaire concerning strategies — Oxford's (1990) *The Strategies Inventory of Language Learning* (SILL) version 7 (EFL/ESL) in Japanese translated by Watanabe (1990) — was used. The Test of English for International Communication (TOEIC) scores were used to measure students' English proficiency. The tests were conducted in a sample consisting of 195 1<sup>st</sup> - to 4<sup>th</sup>-year students from three different Japanese universities.

Five factors are extracted from this study: Factor 1, *Metacognitive-affective strategy*; Factor 2, *Memory-compensation strategy*; Factor 3, *Social strategy*; Factor 4, *Cognitive strategy*; and Factor 5, *Entrance-exam-measured strategy*, which is the idiosyncratic factor among Japanese students. The significant correlation ( $p < .01$ ,  $p < .05$ ) was found among *Metacognitive-Affective strategy* and *Cognitive strategy*, and English proficiency. The negative correlation ( $p < .05$ ) was found between *Entrance-exam-measured strategy* and English proficiency. There is a difference in strategy use associated with gender. Based upon these findings, the researcher recommends that more training should be given in using *Metacognitive-affective strategy* and *Cognitive-memory strategy* by embedding them into regular classroom activities.

**Key Words** : language-learning strategy, English proficiency, English as a foreign language

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学習ストラテジーが大学生の英語力に及ぼす影響について

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## The Problem

### *Introduction*

Much research and argument has emerged focusing on language-learning strategy (LLS) in the last 20 years, because strategies are especially important for language learning as tools for active, self-directed involvement, which is essential for developing communicative competence (Oxford, 1990). From a teaching perspective, “unlike most other characteristic of the learner, personality, and general cognitive style, learning strategies are readily teachable” (Oxford & Nyikos, 1989, p. 291), and appropriate language learning strategies result in improved proficiency and greater self-confidence” (Oxford, 1990, p. 1). Therefore, the research exploring the effect of the learning strategies has the practical advantage for English as a second language (ESL) or English as a foreign language (EFL).

To assess language-learning strategies in this article, the Strategy Inventory for Language Learning (SILL) was used. SILL is approved as, “the most comprehensive classification of learning strategies to date” (Ellis, 1994, p.539), and it is the most-often-used strategy scale around the world at this time.

This study addresses the following research questions: (a) What are the primary language learning strategies used by Japanese university students?; (b) Is there a relationship between proficiency and the use of language-learning strategy?; (c) Is there a difference in strategy use associated with gender?; and (d) What are the appropriate language-learning strategies for Japanese university students that result in improved proficiency?

The term strategies is defined as, “steps taken by learners to enhance their own learning” (Oxford, 1990, p. 1).

### *Background of the Problem*

For Japanese university students who live in this global society, it is critical to acquire English communication skills because English is practically acknowledged as a universal language for many global industries. However, many Japanese university students do not have sufficient English communication skills. According to the worldwide data for Test of English for International Communication (TOEIC), Japan is ranked at the bottom for English proficiency (The Institute for International Business Communication *Worldwide Data, 2002-2003*, 2005). One cannot simply conclude that the low score in the paper test

equals a lack of communicative skills; however, it is indisputable that many Japanese university students cannot make use of their English skills in authentic situations. It is a challenge for English teachers in Japan to understand why students do not acquire sufficient English skills.

### *Purpose of Study*

The major purposes of this study were: (a) to explore which kinds of learning strategies are used by Japanese university students, (b) to determine how language-proficiency levels relate to the use of language-learning strategies, (c) to seek the reasons many Japanese university students' proficiency levels are low, and (d) to offer the implications for instructors in Japanese university classrooms.

### *Research Questions*

This study addresses the research questions: (a) What are the primary language-learning strategies used by Japanese university students?; (b) Is there a relationship between English proficiency and learning-strategy use in Japanese university students?; (c) Is there a difference in strategy use associated with gender?; and (d) What are the appropriate language-learning strategies for Japanese university students that result in improved proficiency?

## Review of the Literature

### *Summary of Past Research*

In 1975, Rubin and Stern published research on the use of language-learning strategies (LLS). Following that, much research and argument emerged focusing on language learning strategy in ESL/EFL. The earlier studies focused on attempting to identify what might be good language learning strategies, and tried to establish a relationship between them and successful language learning. Rubin (1975) identified seven strategies in which good language learners were actively engaged. Stern (1975) also attempted to examine the behaviors of good language learners and identified 10 contributing behaviors. In the 1980s, more attempts were made to classify the contributing strategies into general categories.

Rubin (1981), by using data from the previous literature and her own research, invented a new classification system. In this system, strategies are divided into two broad categories: strategies *directly* related to language learning and those *indirectly* related to

language learning. Wenden (1983) examined Rubin's work and asserted that a specific metacognitive element should be included in the system. Carver (1984) introduced his classification system, "strategies for organizing learning", which include strategies for arranging learning and for manipulating learning opportunities. Accordingly, in the late '80s, research in cognitive psychology had begun to influence the classification systems of LLS in second-language and foreign-language acquisition (SFLA). O'Malley, Chamot, and Walker (1987) introduced a system that has three broad categories: metacognitive, cognitive, and social/affective categories. Finally, Oxford (1989) established a comprehensive strategy classification system. This system, obviously influenced by Dansereau (1978) in cognitive psychology and Rubin (1981) in SFLA study, tried to cover all the strategies mentioned in the previous literature.

Oxford and Nyikos (1989) discussed variables affecting choice of learning strategies used by 1,200 foreign-language students in a conventional academic setting using the Strategy Inventory for Language Learning (SILL), which consists of 121 items. They found five main factors: Factor 1, *Formal rule-related practice strategies*; Factor 2, *Functional practice strategies*; Factor 3, *Resourceful, independent strategies*; Factor 4, *General study strategies*; and Factor 5, *Conversational input elicitation strategies*. They also examined the influence of self-perceptions of motivation and proficiency and the effects of course status (required vs. elective), years of study, sex, and major. The results indicated that:

[T]he degree of expressed *motivation* was the single most powerful influence on the choice of language learning strategies, that *sex* had a profound effect on strategy choice, and that all the other variables listed—and some interactions among these variables—had significant effects on the reported use of strategies. (p. 294)

The difference between this system and those in earlier studies is the strategies mentioned in this system tend to look more like underlying mental processes and can be discussed in the framework of a learning theory in cognitive psychology.

Oxford and Burry-Stock (1995) discussed strategy scales, comparing SILL with other scales, and provided detailed results concerning ESL/EFL using SILL. They conducted the factor analysis comparison across six data sets (Puerto Rico, Taiwan, PR China, Japan, Egypt, and combined U.S.). They concluded:

Among the most important factors explaining the variance were active, naturalistic language use, metacognitive planning, and sensory memory strategies. These three factors appear repeatedly across data sets. Affective and social strategies as a combination, affective strategies alone, reflective strategies, formal oral practice compensation and analysis, compensation in speaking, social strategies, visual memory, atten-

tion to key details, and general memory strategies were also common various data sets. (p. 17)

Bremner (1998) investigated levels of strategy use among a group of Hong Kong learners, and examined levels of association between strategy use and language proficiency. He found that, “there was significant variation in proficiency in relation to eleven out of possible fifty strategies. Of these, nine were in the cognitive category, one in the compensation category, and one in the social category” (p. 490). He found that, “the Hong Kong students used compensation strategies more than any other strategy, and this was followed by metacognitive strategies” (p. 501). He also reported, “significant differences by proficiency level were found in the use of three of the broad strategy categories. Two of these, cognitive and compensation, showed positive variation, indicating higher use of these strategies among higher proficiency levels” (p. 502).

#### *Summary of Research in Japan*

In the field of ESL and EFL, a lot of research concerning the use of language-learning strategies has been conducted since Oxford’s original Strategy Inventory for Language Learning (SILL) was introduced in 1987. Also in Japan, researchers began to employ Oxford’s SILL in EFL. Among them, Watanabe’s (1990), and Takeuchi’s (1991, 1993a, 1993b) research had important implications regarding the use of language learning strategies among Japanese university students.

Watanabe (1990) used Oxford’s (1990) SILL version 7.0 in Japanese and administered it to a total of 315 college and university students. He found five factors in his study of H college: Factor 1, *Communicative learning strategies*; Factor 2, *Compensation and guessing strategies*; Factor 3, *Socio-affective strategies*; Factor 4, *Formal learning strategies*; and Factor 5, *Mental operational strategies*. He also found five factors in his study of S university: Factor 1, *Communicative learning strategies*; Factor 2, *General study strategies (cognitive)*; Factor 3, *General study strategies (affective)*; Factor 4, *Memory strategies*; and Factor 5, *Compensation and guessing strategies*. He concluded, “the classification of strategies as a result of factor analysis in the present study was not consistent with that of Oxford (1990)” (p. 39).

Takeuchi (1991) attempted to review the work on SILL in SFLA research. He concluded:

[T]he use of LLS is an important factor, but we should remember that it is not everything. As this review has indicated, many studies have been made on the identification & classification of LLS and on the variables affecting the use of LLS. Our

knowledge, however, is limited concerning the effects of LLS on SFLA (p. 79).

Takeuchi (1993a) examined the relationship between the frequency of LLS use and EFL listening comprehension ability through the use of a stepwise multiple regression procedure. He found that the self-report frequency of four LLSs was positively related to EFL listening comprehension ability while three LLSs had a negative relationship with EFL listening ability.

Takeuchi (1993b) conducted a survey on 78 Japanese 1st-year students of English at a women's college in Kyoto. Using multiple regression analysis, he found that eight SILL items predicted 60% of the variance in scores on the Comprehensive English Language Test (CELT). Four strategies positively predicted language achievement: to write notes, messages, letters, or reports in English; to try not to translate word-for-word; to find the meaning of an English word by dividing words into parts to find meaning; and to pay attention when someone is speaking English. Four strategies negatively predicted language achievement: to ask questions in English, to use flashcards to remember new English words, to write down feelings in a language-learning diary, and to try to find as many ways as possible to use English. Takeuchi concluded, "this study confirmed that the self-reported frequency of some LLS was positively related to proficiency of English. Contrary to expectations, however, the number of LLS which were related positively to the proficiency was rather small" (p. 29).

Yamato (2001) conducted factor analysis on strategy items using SILL in Japanese, and found six factors: Factor 1, *Metacognitive strategies*; Factor 2, *Cognitive strategies*; Factor 3, *Heuristics strategies*; Factor 4, *Social/Affective strategies*; Factor 5, *Conceptually driven strategies*; and Factor 6, *Pleasure-oriented strategies*. As the result of the path analysis, he concluded, "as far as the influence on proficiency was concerned, strategy use had a direct impact on proficiency as would be expected" (p. 35).

## Methodology

### *Population*

The population of the study is Japanese university students who have studied English for 6 years prior to entering a university and learning English there.

### *Sample*

A total of 194 Japanese university students from Bunkyo-Gakuin University in Saitama

Prefecture, Atomi-Gakuen University in Tokyo, and Komazawa University in Tokyo participated in this study. The sample consisted of 144 female and 50 male students. They were from 1st-year to 4th-year students from the human studies department, the literature department, the economics department, the management department, and the law department. The participants were selected on the basis of convenience and availability. A total of 194 participants, who the researcher taught English once a week at the selected universities, were included in the study. The sample was voluntarily asked to answer the questionnaire during the classes and took the TOEIC. Of the 194 students, 56 took the TOEIC on July 21 and 27, 2005. All of the students have progressed through the Japanese education system in typical fashion, having studied English for 6 years prior to entering the university.

### *Survey Instruments*

Two types of instruments were used in this study: (a) A Japanese version of the Strategy Inventory for Language Learning (SILL) (See Appendix A), which was translated by Watanabe (1990), was used to measure students' frequency of use of language learning strategies; and (b) TOEIC scores were used in order to measure their English proficiency.

### *The Strategy Inventory for Language Learning (SILL)*

The instrument used for collecting data on strategy use was Oxford's (1989) Strategy Inventory for Language Learning (50-items Version 7.0 for ESL/EFL) in Japanese. The SILL is a self-scoring paper-and-pencil survey and consists of 50 items, which Oxford and Burry-Stock (1995) divided into six categories:

- (1) *Memory strategies*, such as grouping, imagery, rhyming, and structured reviewing (nine items).
- (2) *Cognitive strategies*, such as reasoning, analyzing, summarizing (all reflective of deep processing) as well as general practicing (fourteen items).
- (3) *Compensation strategies* (to compensate for limited knowledge), such as guessing meanings for the context in reading and listening and using synonyms and gestures to convey meaning when the precise expression is not known (six items).
- (4) *Metacognitive strategies*, such as paying attention, consciously searching for practice opportunities, planning for language tasks, self-evaluating one's progress, and monitoring error (nine items).
- (5) *Affective (emotional, motivation-related) strategies*, such as anxiety reduction, self-

encouragement, and self-reward (six items).

(6) *Social strategies*, such as asking questions, cooperating with native speakers of the language, and becoming culturally aware (six items) (p. 5).

Each item in the survey is a statement starting with, *I do ...* (e.g., I review English lessons often.), and students respond on a 5-point Likert scale ranging from 1 (Never or almost never true of me) to 5 (always or almost always true of me).

#### *TOEIC as a Proficiency Measure*

The Test of English for International Communication (TOEIC) was administered to measure the participants' English proficiency. The TOEIC measures the ability of non-native English-speaking people to use English in everyday work situations. The test consists of 200 questions to be completed within 2 hours and is divided into two sections. Section I, the listening component, contains 100 questions to be completed in 45 minutes. Section II, the reading component, contains 100 questions to be completed in 75 minutes. There are no breaks during the test. The proficiency of the examinee is expressed as a numerical score between 5 and 495 for both the listening and reading parts, giving a total score between 10 and 990.

#### *Reliability of the Instrument*

The degree of reliability of an educational measure is usually expressed by a correlation coefficient. As a rough rule of thumb, a measure is considered reliable and practical for most research if its reliability coefficient is .80 or higher (Gall, Gall, & Borg, 1999). Internal reliability or consistency of the items in an index was measured using Cronbach's Alpha, which equaled .92 using a Japanese translation with 255 Japanese university and college EFL students (Watanabe, 1990). The TOEIC score has more than 3 million test takers per year and is recognized around the world as the standard test for measuring workplace English-language proficiency. Therefore, it could be said that the two tests used in this study are reliable to the extent that the test items are consistent with one another.

#### *Data Collection Procedure*

The questionnaire was administered in Japanese in the English classes at Atomi-Gakuen University, Komazawa University, and Bunkyo Gakuin University in July 2005. The TOEIC was administered on July 21, 2005 at Komazawa University, and on July 27, 2005 at Bunkyo Gakuin University under the supervision of the researcher and an assistant. Upon completion of the data collection, descriptive statistics were computed for all

questionnaire items and TOEIC scores. All of the data was input into the Statistical Package for the Social Sciences (SPSS12.0J for Windows).

### *Preparation of Data*

All of the data collected through the questionnaires was input into the Statistical Package for the Social Sciences (SPSS12.0J for Windows). There were no missing data in this study. The data were analyzed in two phases. First, a factor analysis was employed to summarize the underlying characteristics of learning strategy of this population. The factor extraction was processed with the maximum-likelihood method with Promax rotation. Second, once the factors were identified, the relationship between strategy variables and proficiency variables was investigated by correlation analyses. The collected data were subjected to qualitative analysis with statistical measures using correlation and exploratory factor analysis. A factor analysis was employed to summarize the underlying characteristics of learning strategy use among this population. The factor extraction was processed with the maximum-likelihood method with Promax rotation. The relationship between strategy variables and proficiency variables was investigated using correlation analysis.

## The Findings

### *Research Question 1*

To answer research question 1—What is the primary language learning strategies used by Japanese university students?—a factor analysis for 50 items in the questionnaire was conducted to derive the underlying factors in this sample. Table 1 shows the results of the factor analysis for 50 items in the questionnaire.

The factors from the questionnaire, determined by the scree plot, yielded five factors. Eigenvalue and Scree Plot determined the number of the factors. Factor 1, the largest component of language learning motivation for this sample, 20.1% of all items' variance, has a heavy loading from 14 statements (14, 18, 33, 34, 35, 36, 37, 38, 39, 42, 43, 44, 47, and 50) such as “I plan my schedule so I will have enough time to study English,” “I look for people I can speak to in English,” and “I try to find out how to be a better learner of English.” Items 33, 34, 35, 36, 37, and 38 refer to such strategies as paying attention, consciously searching for practice opportunities, planning for language tasks, and self-evaluating; items 39, 42, 43, and 44 refer to underlying psychological conditions for learning

**Table 1** *The Results of Factor Analysis for the 50 Items in the Questionnaire (N=194)*

Items	Factor				
	1	2	3	4	5
34 To plan my schedule to study	.93				
35 To look for people to talk with in English	.66				
33 To try to be a better learner of English	.62				
36 To look for opportunities to read in English	.60				
37 To have clear goals	.52				
47 To practice English with other students	.48				
38 To think about my progress	.46				
39 To try to relax	.44				
43 To write down my feelings in a diary	.44				
44 To talk to someone else about how I feel about English learning	.41				
50 To try to learn about the culture of English speakers	.40				
42 To notice if I am tense or nervous when I'm learning English	.38				
14 To start conversations in English	.34				
18 To skim an English passage, and read carefully	.26				
2 To use new English words in a sentence		.62			
22 To try not to translate word for word		.58			
28 To guess what the other person will say next		.49			
9 To remember words by remembering their location on the page etc.		.46			
1 To think of relationships between what I already know and new things		.46			
4 To remember a new word by making a mental picture		.43			
30 To try to find many ways to use English		.37			
29 To use a word that means the same thing		.36			
24 To make guesses on unfamiliar English words		.34			
13 To use English in different ways		.34			
31 To notice my English mistakes		.32			
3 To connect the sound and an image of the word		.31			
46 To ask English speakers to correct my mistakes			.74		
45 To ask the other person to slow down			.69		
48 To ask for help from English speakers			.65		
49 To ask questions in English			.64		
25 To use gesture			.43		
40 To encourage myself to speak English			.35		
11 To try to talk like native English speakers			.25		
26 To make up new words if I don't know the right ones			.13		
16 To read for pleasure in English				.85	
15 To watch English TV shows or movies				.61	
17 To write notes, messages in English				.58	
23 To make summaries of information in English				.36	
7 Physically to act out new English words				.30	
19 To look for words in my own language that are similar to new words					.57
12 To practice the sounds of English					.55
10 To say or write new words several times					.44
27 To read English without looking up every new word					-.39
6 To use flashcards					.36
41 To give myself a reward or treat					.35
20 To try to find patterns in English					.33
8 To review English lessons often					.29
21 To find the meaning of word by dividing it into parts					.27
5 To use rhymes to remember					.25
32 To pay attention when someone is speaking English					.15

Note. Results were calculated using the maximum-likelihood method with a Promax rotation.

such as anxiety reduction and control feelings in affective strategy, which are characterized in Oxford's (1989) metacognitive strategy category. Thus, Factor 1 reflects learners' preference to use metacognitive and affective strategies. Therefore, Factor 1 was named *Metacognitive-Affective strategy*. Factor 2 is weighted by 12 items (1, 2, 3, 4, 9, 13, 22, 24, 28, 29, 30, and 31). Items 1, 2, 3, and 4 refer to the use of memory strategies such as grouping, imagery, and reviewing in a structured way, and items 24 and 28 refer to the use of compensation strategies such as guessing meaning and using synonyms and gestures. Hence, this factor was named *Memory-Compensation strategy*. Factor 3 received loading from eight items (11, 25, 26, 40, 45, 46, 48, and 49). Items 45, 46, 48, and 49 concern social strategies, such as "I ask English speakers to correct me when I talk" and "I practice English with other students." Therefore, Factor 3 was labeled *Social strategy*. Factor 4 received loading from five items (7, 15, 16, 17, and 23). Four items, 15, 16, 17, and 23, indicate preference to the use of cognitive strategies such as "I read for pleasure in English" and "I watch English-language TV shows spoken in English or go to movies spoken in English." Therefore, factor 4 was named *Cognitive strategy*. Factor 5 received loading from 11 items (5, 6, 8, 10, 12, 19, 20, 21, 27, 32, and 41). This factor has mixed components from Oxford's classification. Five items concern cognitive strategies, three items refer to memory strategies, and other items refer to compensation, metacognitive, and affection strategy classification. These strategies, such as using flashcards, saying or writing new words several times to help to memorize multiple English words, and self-encouragement, are regarded as effective methods to pass the university English entrance examination in Japan. Therefore, Factor 5 was called, *Entrance-Exam-Measured strategy*.

### *Research Question 2*

To answer research question 2—Is there a relationship between English proficiency and learning strategy use in Japanese university students?—the correlation analysis was conducted between English proficiency (the score of the TOEIC) and language-learning strategy (LLS) use. Of the sample, 56 took the TOEIC test.

Table 2 shows the descriptive statistics of the TOEIC test.

Table 3 shows the results of the Pearson's correlation coefficients among TOEIC scores and the five factors from the questionnaire.

**Table 2** *The Results of the Descriptive Statistics of TOEIC Scores (n=56)*

	Min.	Max.	Mean	SD
The Score of Listening	55.0	360.0	248.8	56.1
The Score of Reading	220.0	740.0	140.8	55.0
The Total Score	145.0	380.0	389.9	97.5

Note. The proficiency of the examinee is expressed as a numerical score between 5 and 495 for both the listening and reading parts, giving a total score between 10 and 990.

**Table 3** *The Results of the Pearson's Correlation Coefficients Among TOEIC Scores and Five Factors From the Questionnaire (n=56)*

TOEIC score		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Listening	<i>r</i>	.41**	.20	.38**	.45**	-.31*
Reading	<i>r</i>	.23	.14	.03	.09	-.23
The total	<i>r</i>	.40**	.19	.24	.32*	-.31*

\*\* $p < .01$  \* $p < .05$

Note. Factor 1 = *Metacognitive-Affective strategy*; Factor 2 = *Memory-compensation strategy*; Factor 3 = *Social strategy*; Factor 4 = *Cognitive strategy*; Factor 5 = *Entrance-exam-measured strategy*

The difference between the correlation was significant ( $p < .01$ ) between Factor 1, *Metacognitive-Affective strategy* and TOEIC total score. The difference between the correlation was significant ( $p < .05$ ) between Factor 4, *Cognitive strategy*, and English proficiency. No significant correlation was found with other factors.

Table 4 shows the results of the correlation coefficients between TOEIC scores and 50 items.

As Table 4 shows, strategy 49 has a significant correlation with TOEIC total score ( $r = .38, p < .01$ ). Strategy 17 has a significant correlation with the total score ( $r = .32, p < .05$ ). Strategy 6 has a negative correlation with the total score ( $r = -.37, p < .01$ ). Strategy 23 has a significant correlation with the total score ( $r = .32, p < .05$ ). Strategy 3 has a significant correlation with the listening score of TOEIC ( $r = .42, p < .01$ ). Strategy 17 has a significant correlation with the listening score ( $r = .38, p < .01$ ). Strategy 23 has a significant correlation with the listening score ( $r = .42, p < .01$ ). Strategy 35 has a significant correlation with the listening score ( $r = .35, p = .01$ ). Strategy 42 has a significant correlation with the listening score ( $r = .27, p < .05$ ). Strategy 48 has a significant correlation with the listening score ( $r = .37, p < .01$ ). Strategy 49 has a significant correlation with

**Table 4** *The Results of the Correlation Coefficients Among TOEIC Scores and 50 Items*

Item no.	Listening	Reading	Total	Item no.	Listening	Reading	Total
1	-.01	-.04	-.03	26	.09	-.02	.04
2	.10	.10	.11	27	.23	.31*	.30*
3	.42**	.03	.26	28	.15	.08	.14
4	.06	.07	.07	29	.03	-.04	-.01
5	-.00	-.27*	-.15	30	.21	.01	.13
6	-.37**	-.28*	-.37**	31	.07	.07	.08
7	-.10	-.13	-.14	32	.04	-.03	.00
8	-.08	-.01	-.06	33	.14	.08	.13
9	-.10	.00	-.00	34	.20	.19	.23
10	-.20	.02	-.11	35	.35**	.15	.29*
11	-.02	.05	.02	36	.29*	.18	.27*
12	.04	.05	.05	37	-.07	.03	-.02
13	.06	.13	.11	38	.02	.24	.15
14	.18	.12	.17	39	.04	.11	.08
15	.23	.12	.20	40	.14	.04	.10
16	.34*	.12	.27*	41	.07	-.06	.01
17	.38**	.19	.32*	42	.27*	-.03	.14
18	-.11	-.06	-.09	43	.02	-.03	-.00
19	-.09	-.27(*)	-.201	44	.040	-.03	.01
20	.07	.19	.15	45	-.08	-.11	-.11
21	-.01	.11	.06	46	.15	-.02	.08
22	-.04	.04	-.01	47	.07	.01	.04
23	.42**	.13	.31*	48	.37**	.06	.24
24	-.14	-.04	-.10	49	.44**	.24	.38**
25	.24	.02	.15	50	.20	.09	.16

\*\* $p < .01$  \* $p < .05$

the listening score ( $r = .44, p < .01$ ). Strategy 19 has a negative significant correlation with the listening score ( $r = -.27, p < .05$ ) and strategy 6 has a negative significant correlation with the total score of TOEIC ( $r = -.37, p < .01$ ).

*Research Question 3*

To answer research question 3—Is there a difference in strategy use associated with gender?—the *t* test was conducted among the sample data.

Table 5 shows the results of the descriptive statistics of the group.

**Table 5** *Descriptive Statistics Among the Group*

	Gender	N	Mean	SD
Memory	male	50	2.95	0.42
	female	138	3.03	0.55
Cognitive	male	47	3.10	0.41
	female	140	3.27	0.50
Compensation	male	49	3.14	0.54
	female	141	3.25	0.52
Metacognitive	male	48	3.06	0.60
	female	142	3.32	0.63
Affective	male	49	2.66	0.59
	female	142	3.00	0.60
Social	male	50	2.94	0.75
	female	143	3.42	0.75

Table 6 shows the results of the *t* test for the differences in strategy use according to gender variable.

**Table 6** *Results of t Test for the Differences in Strategy Use According to Gender Variable*

Strategy	t	df	p
Memory	10.8	186	.28
Cognitive	2.06*	185	.04
Compensation	1.24	188	.21
Metacognitive	2.50	188	.01
Affective	3.50*	189	.01
Social	3.88**	191	.00

As Table 6 shows, no statistically significant gender differences were found in strategies such as memory ( $t(186) = 10.8$ , n.s.), compensation ( $t(188) = 1.24$ , n.s.), and metacognitive

( $t(188) = 2.50$ , n.s) ; whereas significant gender differences were found in strategies such as cognitive ( $t(185) = 2.06$ ,  $p < .05$ ), affective ( $t(189) = 3.50$ ,  $p < .5$ ), and social ( $t(191) = 3.88$ ,  $p < .01$ ).

#### Research Question 4

To answer research question 4—What kind of strategy can teachers recommend their learners use in order to improve their proficiency?—first, the descriptive statistics analysis

**Table 7** *The Rank of Frequency Level of the 50 Items (N=194)*

Rank	Item No.	Mean	SD	Rank	Item No.	Mean	SD
1	45	4.16	0.85	26	42	3.23	1.18
2	25	4.11	0.88	27	9	3.2	1.08
3	10	4.1	0.90	28	23	3.16	0.97
4	32	3.99	0.78	29	13	3.05	1.01
5	41	3.9	0.93	30	22	2.96	0.92
6	29	3.86	0.90	31	39	2.95	0.94
7	31	3.83	0.79	32	34	2.94	1.11
8	24	3.77	0.82	33	14	2.92	1.07
9	12	3.76	1.01	34	36	2.92	1.08
10	1	3.6	0.87	35	48	2.88	1.32
11	11	3.58	0.96	36	47	2.85	1.26
12	50	3.58	1.12	37	49	2.84	1.17
13	19	3.57	0.95	38	5	2.82	1.17
14	37	3.55	1.09	39	38	2.82	0.94
15	2	3.48	0.95	40	8	2.69	0.95
16	3	3.48	1.00	41	26	2.64	1.15
17	21	3.46	1.20	42	35	2.61	1.17
18	46	3.45	1.10	43	28	2.57	0.98
19	33	3.43	1.08	44	44	2.49	1.17
20	15	3.41	1.30	45	16	2.39	1.26
21	18	3.36	1.18	46	6	2.37	1.24
22	30	3.31	0.92	47	27	2.36	1.08
23	4	3.27	1.06	48	17	2.24	1.19
24	20	3.26	1.02	49	7	2.21	1.12
25	40	3.23	0.99	50	43	1.72	1.01

was conducted for frequency level of the 50 items to see which strategies were most frequently used by individual learners. Second, correlation analysis was conducted among the 50 items and TOEIC scores in order to explore which strategy has a significant correlation with English proficiency. Table 7 shows the rank of the frequency level of the 50 items on SILL and the correlation among the 50 items and TOEIC score.

Oxford (1990) defines the range of 2.5 to 3.4 as medium use. As Table 7 shows, 20 items fell within the range of 5 to 3.5, which is defined as higher than medium use, 23 items fell within the range of medium use, and 7 items fell within the range of lower than medium use. Item 45, 25, and 10 are most frequently used strategies among this sample.

### Conclusions and Further Discussion

The findings from this study on language-learning strategies have several important implications for teaching English to Japanese university students.

#### *The Primary Language Learning Strategies Among Japanese University Students and Their Characteristic Quality*

In this study, five factors were extracted from SILL. The factors and their distinctive

**Table 8** *Five Factors and Their Distinctive Features*

Factor	Name of the Factors	Distinctive Features of Strategies
1	<i>Metacognitive-Affective Strategy</i>	<ul style="list-style-type: none"> <li>· Evaluating one's progress, planning for language tasks, and consciously searching for practice opportunities etc.</li> <li>· Anxiety reduction, self-encouragement, and self-reward</li> </ul>
2	<i>Memory-Compensation Strategy</i>	<ul style="list-style-type: none"> <li>· Grouping, imagery, rhyming, moving physically, and reviewing in a structured way</li> <li>· Guessing meaning from context and using synonyms and gestures to convey meaning</li> </ul>
3	<i>Social Strategy</i>	<ul style="list-style-type: none"> <li>· Asking questions, cooperating with others, and empathizing with others</li> </ul>
4	<i>Cognitive Strategy</i>	<ul style="list-style-type: none"> <li>· Reasoning, analyzing, summarizing, and practicing</li> </ul>
5	<i>Entrance - Exam - Measured Strategy</i>	<ul style="list-style-type: none"> <li>· Planning for language tasks, grouping, reviewing lessons, repeating, and memorizing</li> </ul>

features are summarized in Table 8.

The results of the factors analysis of SILL among this sample showed that the components of the factors were not completely consistent with that of Oxford (1989). Factor 5, *Entrance-exam-measured strategy*, is especially regarded as a characteristic factor among Japanese university students. The strategies in Factor 5, such as practicing the sounds of English, saying or writing new words several times, using flashcards, and trying to find patterns of English structure, are considered effective methods to pass university entrance English examinations in Japan. They are called “entrance-exam-measured strategies.” The applicants, in order to enter universities, adapt these kinds of strategies because almost all university entrance examinations include questions on many difficult reading passages. As a result, they have to memorize a lot of difficult words or expressions to read the long, difficult passages. The distinguishing quality of this factor proves that university entrance examinations have an effect on students’ choice of strategy for learning English (Watanabe, 1990).

#### *Correction Between Proficiency and Strategy*

It is important for English teachers not only to find the types of strategies that are most frequently used, but also important to learn which types of strategies correlate to English proficiency or which strategy is most effective for learning English. Table 9 shows the summarized results of the correlation analysis between the factors and proficiency.

**Table 9** *The Summarized Results of Correlation Analysis*

	strategy	Metacognitive -Affective	Memory -Compensation	Social	Cognitive	Entrance-Exam -Measured
<i>r</i>	Listening	.41**	.20	.38**	.45**	-.31*
	Total Score	.40**	.19	.24	.32*	-.31*

\*\* $p < .01$ , \* $p < .05$

These results indicate that the students with Factor 1, *Metacognitive-Affection Strategy*, Factor 3, *Social Strategy*, and Factor 4, *Cognitive Strategy*, who show active attitude toward learning with communicative purpose, are successful in learning English. On the other hand, the students with Factor 2, *Memory-Compensation Strategy* and Factor 5, *Entrance-Exam-Measured Strategy*, who use the traditional exam-oriented strategies, are not successful in English. Factor 5, *Entrance-exam-measured Strategy*, especially has a negative correlation with English proficiency. This indicates that the entrance-exam-measured strategies such

as using flashcards, saying or writing new words several times to memorize a lot of English words, and self-encouragement, do not contribute to higher English proficiency. Instead, strategies such as seeking opportunities to speak English and asking a native speaker to correct English can contribute to higher English proficiency. It can be concluded that students, who seek opportunities to use or practice English and try to overcome the deficiencies present when learning the language in a non-English speaking country, can be successful English learners. Students who regard English as something that can be studied at a desk or in the classroom cannot be successful.

#### *Difference in Strategy Use Associated With Gender*

Previous research in ESL proves that there is difference in use of strategies by gender (Green & Oxford, 1995). If a gender difference is found, that gives a suggestion for classroom learning. In this study, the results show that there is a significant gender difference on affective and social strategies. A lower use of affective and social strategies among male students implies that Japanese male university students are rather hesitant to look for help with learning and they do not pay much attention to their psychological state when they are learning, while female students passively ask for help to improve their English skills. These results point to the conclusion that gender has an effect on strategy choice (Oxford & Nyikos, 1989), so teachers should take gender differences into consideration when teaching.

#### *Frequency Level and Proficiency*

It cannot be simply concluded that one strategy is effective to learn English because it has a significant correlation with proficiency. Students do not use one strategy but various kinds of strategies at the same time; however, it is interesting to compare the relationship between the frequency level in using the strategy and English proficiency, and it gives information about appropriate teaching methods. Table 10 and chart 1 show the comparison between the items that have a significant correlation with proficiency and the ranking of strategy frequency levels.

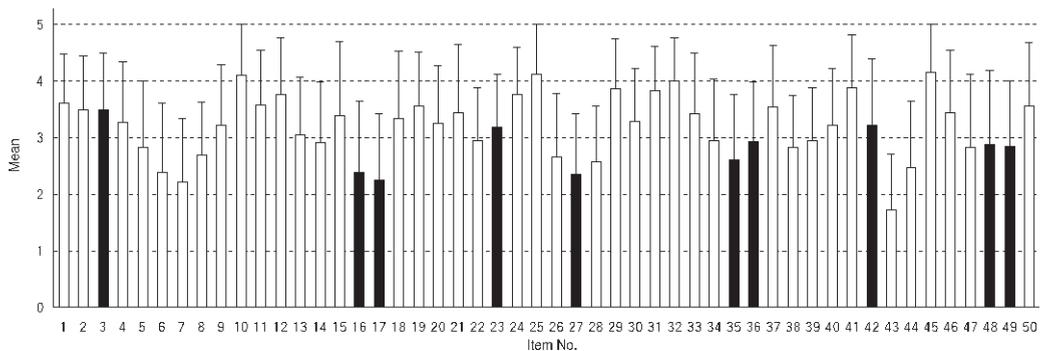
As Table 10 and chart 1 show, strategies 3, 16, 17, 23, 35, 36, 42, and 49, which have significant correlations with proficiency, are all ranked low in this sample. For example, strategy 17, which has a correlation with English proficiency (TOEIC score), was ranked 48 in frequency of strategy use. This indicates that the sample in this study did not often use the strategies that would contribute to English proficiency. In addition the top three items of the frequency ranking, 45, 25, and 10, have no correlation with proficiency. It

**Table 10** Comparison Between the Items That Have Significant Correlation With Proficiency and the Ranking of Strategy Frequency Level

Item no.	TOEIC score (r)			Ranking	Mean
	Listening	Reading	Total		
3	.42**	.03	.26	16	3.48
16	.34*	.12	.27*	45	2.39
17	.38**	.19	.32*	48	2.24
23	.42**	.13	.31*	28	3.16
27	.23	.301*	.30*	47	2.36
35	.35**	.15	.29*	42	2.16
36	.29	.18	.27*	34	2.94
42	.27*	-.03	.14	26	3.23
48	.37**	.06	.24	35	2.88
49	.44**	.24	.38**	31	2.84

\*\* $p < .01$ , \* $p < .05$

**Chart 1** Comparison Between the Items That Have Significant Correlation With Proficiency and the Ranking of Strategy Frequency Level



Note. The black columns represent the factors that correlate.

would explain why the average scores of the sample are rather low when compared with the world data of TOEIC in 2003 (the average score of listening is 240, reading is 181, and total is 421). It is not too much to say that it is one of the reasons many Japanese students do not get higher scores in the TOEIC or other international communication tests when compared with other EFL countries.

## Recommendations

### *Practical Suggestions for Implementation of the Findings*

Through strategy assessments, teachers can help students recognize the power of using SILL for making learning quicker, easier, and more effective. Teachers can help students identify their current SILL by surveys or by other means. Sharing research results like those in this study is a good way to persuade students to use such strategies as much as possible when they study. “Appropriate language learning strategies result in improved proficiency and greater self-confidence” (Oxford, 1990, p. 1). Teachers need to show less successful learners how more successful learners combine the strategies. On the other hand, teachers should recognize certain strategies might be more suited to some learners than others. It is important for teachers to have good relationships with their students, and to have an understanding of their strengths and weaknesses. Teaching is not a one-way activity but an interactive process, so it is important for teachers to have good relationships with learners. “When students take more responsibility, more learning occurs, and both teachers and learners feel more successful” (Oxford, 1990, p.11).

The results of this study provide important information about how students learn and give some practical suggestions for teaching English to Japanese university students. The results of this study show that students who use communicative strategies, such as looking for opportunities to use English, are successful learners with the respect to the TOEIC test, while students who are still learning English in the way they used to in high school cannot get high scores on the TOEIC test. Teachers should advise students to avoid the traditional exam preparation techniques, but instead encourage them to use English whenever they can because, “All appropriate language learning strategies are oriented toward the broad goal of communicative competence. Development of communicative competence requires realistic interaction among learners using meaningful, contextualized language. Learning strategies help learners participate actively in such authentic communication” (Oxford, 1990, p. 8). Furthermore, this study found gender differences in strategy use: there is a tendency for female students to choose positive strategies while male students tend to choose passive strategies. Teachers should take this gender difference into consideration.

### *The Need for Further Research*

First, long-term research, ideally from high school to university, should be conducted to

see how variables such as gender, term of the learning, background, attitude, or motivation influence a student's choice of strategy.

Second, more research is required regarding how students from different cultural backgrounds and countries utilize different strategies and prioritize common strategies differently.

Third, more research should be developed to establish whether strategy use has a positive effect on the enhancement of proficiency.

Finally, more research focused on the strategies used by Japanese university students needs to be undertaken, with the ultimate goal of improving their English proficiency.

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## Appendix A

Strategies questionnaire (Oxford, 1989)

Strategy Inventory for Language Learning (SILL)

### Part A

1. I think of relationships between what I already know and new things I learn in English.
2. I use new English words in a sentence so I can remember them.
3. I connect the sound of a new English word and an image or picture of the word to help me remember the word.
4. I remember a new English word by making a mental picture of a situation in which the word might be used.
5. I use rhymes to remember new English words.
6. I use flashcards to remember new English words.
7. I physically act out new English words.
8. I review English lessons often.
9. I remember new English words or phrases by remembering their location on the page, on the board, or on a street sign.

### Part B

10. I say or write new English words several times.
11. I try to talk like native English speakers.
12. I practice the sounds of English.
13. I use the English words I know in different ways.
14. I start conversations in English.
15. I watch English language TV shows spoken in English or go to movies spoken in English.
16. I read for pleasure in English.
17. I write notes, messages, letters or reports in English.
18. I first skim an English passage (read over the passage quickly) then go back and read carefully.
19. I look for words in my own language that are similar to new words in English.
20. I try to find patterns in English.
21. I find the meaning of an English word by dividing it into parts that I understand.
22. I try not to translate word-for-word.
23. I make summaries of information that I hear or read in English.

### Part C

24. To understand unfamiliar English words, I make guesses.
25. When I can't think of a word during a conversation in English, I use gestures.
26. I make up new words if I do not know the right ones in English.
27. I read English without looking up every new word.
28. I try to guess what the other person will say next in English.
29. If I can't think of an English word, I use a word or phrase that means the same thing.

Part D

30. I try to find as many ways as I can to use my English.
31. I notice my English mistakes and use that information to help me do better.
32. I pay attention when someone is speaking English.
33. I try to find out how to be a better learner of English.
34. I plan my schedule so I will have enough time to study English.
35. I look for people I can talk to in English.
36. I look for opportunities to read as much as possible in English.
37. I have clear goals for improving my English skills.
38. I think about my progress in learning English.

Part E

39. I try to relax whenever I feel afraid of using English.
40. I encourage myself to speak English even when I am afraid of making a mistake.
41. I give myself a reward or treat when I do well in English.
42. I notice if I am tense or nervous when I am studying or using English.
43. I write down my feelings in a language-learning diary.
44. I talk to someone else about how I feel when I am learning English.

Part F

45. If I do not understand something in English, I ask the other person to slow down or say it again.
46. I ask English speakers to correct me when I talk.
47. I practice English with other students.
48. I ask for help from English speakers.
49. I ask questions in English.
50. I try to learn about the culture of English speakers.