

Language Learning Strategies for Medical and Nursing School Students

— Based on a Survey of Their Preferences for Language Learning Strategies —

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Abstract

Today self-learning has been getting more important for English learners in Japan. Language Learning Strategies(LLSs) are now considered to encourage overall self-learning for them. This paper reports on LLSs based on the survey of what LLSs Japanese Medical School Students(MSSs) and Nursing School Students(NSSs) think are effective in their English learning. The purpose of this research is to find the better LLSs for MSSs and NSSs. I found out three things: 1) They have some LLS preference tendencies. 2) Their LLSs are somewhat different. 3) LLSs should be taught to them. And besides, this paper offers some helpful suggestions to Japanese MSSs' and NSSs' classrooms.

0. Introduction

Learner-centeredness has been a trend of school education even in Japan, though we still have large classes for teaching English: usually 40 students in one classroom. A Course of Study by Monbusho (Ministry of Education) also states that learner-centered approach should be cultivated in school education.

In order to realize the learner-centeredness, it will certainly be very important for learners to learn how to learn. However, are teachers teaching their students how to learn or learning skills? If they say, "Yes," how are they teaching English?

In Japan, English is not a second language but a foreign language. In spite of that, almost all Japanese students are now learning English at school. Most Japanese students learn English as EFL in the six-year school education. After graduating from high school some students learn English as ESP (English for Specific Purposes). Medical School Students(MSSs) and Nursing School Students(NSSs) also need to learn English through an ESP approach. But the present system seems to be still unsatisfactory. Therefore, it would be necessary to develop the more effective approach for teaching or learning English for them. What should teachers do for such issues?

One of the solutions to these issues is to focus on English language learning itself. All students have learned English for over six years at school. They have a basic knowledge of English, though their proficiency levels are different. They can learn English for themselves by using their own knowledge, if they have their own purposes clearly. But many students don't know effective language learning strategies. In other words, they don't know how to learn communicative English. That is why teachers of English should try to teach how to learn English not only in the classroom but also out of the classroom as well. Moreover, students should learn how to learn English.

This research on Language Learning Strategies(LLSs) will certainly contribute to cultivating Japanese MSSs' and NSSs' English communicative competence.

1. Background of the research

Learning strategies(LSs) are defined by Oxford(1990) as follows:

Learning strategies are specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations.

And she adds to the definition:

Language learning strategies encourage greater overall self-direction for learners. self-direction is particularly important for language learners, because they will not always have the teacher around to guide them as they use the language outside the classroom. Moreover, self-direction is essential to the active development of ability in a new language.

The term, 'language learning strategies(LLSs)', has been used in several meanings by researchers. The meaning of the term is still a little ambiguous, but so far there have been many researches and studies about LLSs.

In the 1970s, Fillmore(1979) focused on the cognitive and social strategies employed by Mexican children who were attending school in California. Naiman et al.(1978) studied good language learners. Rubin(1981) proposed the cognitive processes that young adult learners used in conventional language learning settings.

In the 1980s, Politzer and McGroarty(1985) found several interactions between learner strategies and ethnic background. O'Malley et al.(1985a, 1985b, 1987,1989,1990) studied the use of LLSs by ESL learners in the US. There were three main strategies reported in their study: metacognitive strategies, cognitive strategies, and socioaffective strategies.

In recent years a number of empirical studies have been carried out in the field of SLA (Second Language Acquisition). However, though two decades of studies on LLSs or learner strategies, there still remain some questions:

- 1) What are LLSs defined as?
- 2) What are good LLSs?
- 3) How are LLSs associated with learning results?
- 4) Can LLSs be taught or feasible?

2. English proficiency for MSSs and NSSs

In the medical field Japanese doctors and nurses have been required to study more and more high-tech knowledge of medicine or nursing. In addition, teamworking as well as sharing informa-

tion with each other has been very important and necessary for them. The medical field has already been so much internationalized that English can be a common language when communicating medical information. Therefore, MSSs and NSSs need to learn practical English in Japan.

But in the present-day curricula they have to learn a lot more subjects related to medicine or medication. They have little time to spend learning practical English at school, and many of them haven't learned communicative English so much before starting to study medicine or nursing. They have learned just basic English linguistic knowledge and translation skills. That is to say, they have little experience in using English in real or realistic situations. That is the problem and also the fact. In any case, they are expected to learn English through studying medicine or nursing.

Then what English should be taught to future doctors or future nurses? How should it be taught to them? And what approaches would be effective?

3. Purpose of the Research

The purpose of this research is to find the better ways of teaching English to such MSSs and NSSs. This paper focuses on 'teaching how to learn English.' For the first step it would be important to know their tendencies for LLS preferences: what kinds of LLSs do they think are effective?

If teachers realized their students' LLS preferences, they could help their students learn English for themselves more effectively. It is essential today that teachers should support students' self-learning, self-instruction, or self-access. For that purpose, I carried out this questionnaire survey of LLS preference and collected the data.

4. Research questions

Based on this purpose, this research addressed the following research questions:

- 1) Are there any marked tendencies for English LLSs used by MSSs and NSSs respectively?
- 2) Are there any differences of English LLSs between MSSs and NSSs?
- 3) What LLSs can or should be effectively taught to MSSs or NSSs?

5. Method

Before starting this survey, I had to design the classification of LLSs. It was a slight tough work because there was no fixed idea of LLS classification. In short, if students don't understand the meaning of each LLS item, then it will be impossible to collect good data.

5.1. Classification of LLSs

I designed the questionnaires of English LLS preference based on the classification by Oxford (1990). Thus these questionnaires of this survey consist of six categories of LLSs:

A Memory strategies (direct)

- B Cognitive strategies (direct)
- C Compensation strategies (direct)
- D Metacognitive strategies (indirect)
- E Affective strategies (indirect)
- F Social strategies (indirect)

Oxford classified her six categories of LLSs into two parts: direct strategies and indirect strategies. This survey followed her classification because her classification is more practical to English classrooms in Japan and more feasible to teach how to learn themselves, though some strategies are actually ambiguous, hard to divide and overlap sometimes, as Oxford herself admits:

Despite problems in classifying strategies, research continues to prove that strategies help learners take control of their learning and become more proficient, and the experience of many teachers indicates that the strategy system... is a very useful way to examine such strategies. This system provides, albeit in imperfect form, a comprehensive structure for understanding strategies.

The classification of LLSs proposed in this research is almost the same as Oxford's. Just one LLS item is deleted from the questionnaire list. It is because many Japanese students may not understand the meaning of the question item. Finally the classification of the LLSs in this research is defined and made into the questionnaire items as follows: (note: The questionnaires actually used were carried out in Japanese. See Appendix.)

- A Memory strategies (direct)
 - A1 Grouping
 - A2 Associating/Elaborating
 - A3 Placing new words into a context
 - A4 Using imagery
 - A5 Semantic mapping
 - A6 Using keywords
 - A7 Representing sounds in memory
 - A8 Structured reviewing
 - A9 Using physical response or sensation
 - A10 Using mechanical techniques

- B Cognitive strategies (direct)
 - B1 Repeating
 - B2 Formally practicing with sounds and writing systems
 - B3 Reorganizing and using formulas and patterns
 - B4 Recombining
 - B5 Practicing naturalistically
 - B6 Getting the idea quickly

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- B7 Using resources for receiving and sending messages
 - B8 Reasoning deductively
 - B9 Analyzing expressions
 - B10 Analyzing contrastively
 - B11 Translating
 - B12 Transferring
 - B13 Taking notes
 - B14 Summarizing
 - B15 Highlighting
- C Compensation strategies (direct)
- C1 Using linguistic clues
 - C2 Using other clues
 - C3 Switching to the mother tongue
 - C4 Getting help
 - C5 Using mime or gesture
 - C6 Avoiding communication partially or totally
 - C7 Selecting the topic
 - C8 Adjusting or approximating the message
 - C9 Coining words
 - C10 Using a circumlocution or synonym
- D Metacognitive strategies (indirect)
- D1 Overviewing and linking with already known material
 - D2 Paying attention
 - D3 Delaying speech production to focus on listening
 - D4 Finding out about language learning
 - D5 Organizing
 - D6 Setting goals and objectives
 - D7 Identifying the purpose of a language task
 - D8 Seeking practice opportunities
 - D9 Self-monitoring
 - D10 Self-evaluating
- E Affective strategies (indirect)
- E1 Using progressive relaxation, deep breathing, or meditation
 - E2 Using music
 - E3 Using laughter
 - E4 Making positive statements
 - E5 Taking risks wisely
 - E6 Rewarding yourself
 - E7 Listening to your body

- E8 Using a checklist
- E9 Writing a language learning diary
- E10 Discussing your feelings with someone else

- F Social strategies (indirect)
 - F1 Asking for clarification or verification
 - F2 Asking for correction
 - F3 Cooperating with peers
 - F4 Cooperating with proficient users of the new language
 - F5 Developing cultural understanding
 - F6 Becoming aware of others' thoughts and feelings

5.2. Subjects

A set of these 6 categorized questionnaires were put to 41 MSSs and 103 NSSs. 41 MSSs are all freshmen but their ages are different. Generally most MSSs have learned English in order to pass the entrance examinations. They apparently have enough knowledge of English grammar and vocabulary.

On the other hand, all 103 NSSs had not been studying English for over two years, because they attended practical nursing school for two years after graduating from high school. Accordingly, their English proficiency is almost poor compared to the MSSs, as a whole.

It is certain that both 41 MSSs and 103 NSSs have strong motivation to work in the medical field for the future. As a result, their learning attitudes seem to be essentially good, but English is not necessarily a must subject for their future career. It means that many students do not have strong English language learning awareness.

5.3. Procedures

Students responded each LLS on a scale of 5 from a viewpoint of effectiveness. In order to see if each LLS had a marked tendency, the chi-square test (χ^2) was used. This analysis would be useful to solve the first research question.

And then the data of 41 MSSs were compared with those of 103 NSSs in each LLS. The chi-square test (χ^2) was also used to make an analysis of these data and then solve the second research question.

Lastly, analyzing the collected data carefully or individually, investigating what kinds of LLSs students liked to use, and reading the difference between the LLSs which were regarded as effective and the ones which were used by them, I tried to find the better ways of teaching the MSSs or the NSSs how to learn English.

The results of the questionnaires are demonstrated in the tables. Tables 1-a to 6-b show not only the numbers of each scale (1 to 5), which indicates the effectivity of LLSs and in which the number 5 means 'the most effective', but also the χ^2 values. Table 7 displays the χ^2 values of the differences of each strategy between the MSSs and the NSSs.

Table 1-a. Memory strategies of MSSs

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
5	10	6	12	11	5	5	5	23	13	5
4	10	4	15	12	5	4	5	12	10	8
3	15	14	8	11	19	10	15	5	12	16
2	6	12	3	7	7	15	12	0	3	6
1	0	5	3	0	5	7	4	1	3	5
total	41	41	41	41	41	41	41	41	41	40
chi-square	15.22	9.85	14.00	12.05	18.15	9.61	12.05	44.24	11.56	10.75

*p<0.05 **p<0.01 df=4

Table 1-b. Memory strategies of NSSs

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
5	25	14	12	13	3	4	4	50	18	33
4	29	27	31	22	11	18	12	33	35	29
3	41	43	39	41	31	47	40	16	37	31
2	5	13	16	18	48	28	37	3	10	8
1	3	6	4	9	9	6	8	1	3	2
total	103	103	102	103	102	103	101	103	103	103
chi-square	51.42	41.61	40.06	29.96	68.39	60.54	57.07	84.14	43.94	40.64

*p<0.05 **p<0.01 df=4

Table 2-a. Cognitive strategies of MSSs

	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15
5	22	9	13	6	13	6	5	11	13	6	6	1	4	8	11
4	12	8	12	8	10	12	11	14	18	9	14	10	11	6	11
3	7	15	13	14	11	14	19	10	7	19	13	13	16	15	9
2	0	5	2	11	2	7	4	4	3	4	3	9	6	8	6
1	0	4	1	2	5	2	2	2	0	3	4	7	4	4	4
total	41	41	41	41	41	41	41	41	41	41	40	40	41	41	41
chi-square	41.56	9.12	18.39	10.34	10.10	11.32	23.27	12.29	26.20	20.34	13.25	10.00	13.27	8.39	4.73

*p<0.05 **p<0.01 df=4

Table 2-b. Cognitive strategies of NSSs

	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15
5	42	27	35	7	24	8	8	8	11	13	17	12	19	7	31
4	36	37	43	28	30	16	28	32	44	37	36	33	34	15	30
3	17	32	22	53	35	50	50	47	38	38	36	43	36	41	32
2	7	5	1	11	12	21	13	14	9	12	12	12	12	32	9
1	1	2	2	4	2	6	3	2	1	2	2	2	1	6	0
total	103	103	103	103	103	101	102	103	103	102	103	102	102	101	102
chi-square	62.00	49.96	69.96	80.45	35.30	62.22	70.84	66.76	70.93	51.43	44.04	56.33	43.00	48.26	43.39

*p<0.05 **p<0.01 df=4

When the P-value is less than 0.01 ($p < 0.01$) and if the χ^2 value is more than 13.2767 ($df = 4$), it indicates that there is a significant tendency or difference for it. At $p < 0.05$, and if the χ^2 value is more than 9.48773, it also means that there is a significant difference in case of a less restrictive 95% probability of nonchance results. For the crucially statistical significance, $p < 0.01$ was usually selected but sometimes $p < 0.05$ was selected in this research.

6. Results

6.1. Memory strategies (see Tables 1-a, 1-b, and 7)

1) Almost all 10 strategies indicate marked tendencies. The MSSs consider A1, A3, A4, A8, and A9

Table 3-a. Compensation strategies of MSSs

	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
5	12	8	2	10	13	4	3	11	7	15
4	13	11	8	18	16	3	10	12	3	14
3	12	15	12	11	7	1	20	10	11	7
2	4	5	11	1	2	11	8	7	14	0
1	0	1	7	1	3	22	0	1	6	4
total	41	40	40	41	41	41	41	41	41	40
chi-square	16.68	14.50	7.75	25.71	18.39	35.95	28.88	9.61	9.12	20.75

** *p<0.05 **p<0.01 df=4

Table 3-b. Compensation strategies of NSSs

	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
5	15	13	1	32	28	0	10	6	8	12
4	33	36	9	45	37	1	24	22	7	29
3	45	40	39	21	31	20	52	40	45	43
2	9	12	37	5	6	23	12	28	30	16
1	1	2	16	0	1	59	5	7	13	3
total	103	103	102	103	103	103	103	103	103	103
chi-square	63.07	52.97	56.24	67.63	49.96	111.13	69.28	40.35	52.68	47.44

** *p<0.05 **p<0.01 df=4

Table 4-a. Metacognitive strategies of MSSs

	D1	D2	D3	D4	D5	D6	D7	D9	D10	D11
5	11	13	2	8	8	18	15	15	12	11
4	11	13	2	13	6	11	9	13	21	14
3	17	11	10	10	15	9	15	9	5	10
2	1	4	18	6	6	1	2	3	2	4
1	1	0	8	4	6	2	0	1	1	1
total	41	41	40	41	41	41	41	41	41	40
chi-square	24.00	16.93	22.00	5.95	7.41	23.76	24.24	18.15	34.00	14.25

** *p<0.05 **p<0.01 df=4

Table 4-b. Metacognitive strategies of NSSs

	D1	D2	D3	D4	D5	D6	D7	D9	D10	D11
5	8	21	1	13	15	21	28	17	25	17
4	37	35	8	41	26	26	30	30	36	31
3	42	44	39	39	46	45	35	37	34	42
2	14	3	39	7	14	9	8	13	5	9
1	2	0	16	3	2	2	2	6	3	3
total	103	103	103	103	103	103	103	103	103	102
chi-square	61.90	72.29	60.25	63.46	53.17	53.65	41.51	31.13	48.02	50.16

** *p<0.05 **p<0.01 df=4

LLSs to be effective, while the NSSs consider A1, A8, and A10 LLSs to be effective.

2)The significant differences between both students are shown in A5 and A10 LLSs ($p<0.01$) and A2, A3, and A6 LLSs ($p<0.05$).

6.2. Cognitive strategies (see Tables 2-a, 2-b, and 7)

1)Almost all 15 LLSs also indicate marked tendencies, but B2, B14, and B15 LLSs of the MSSs don't show any marked tendencies. The MSSs consider B1, B3, B5, B8, B9, and B15 LLSs to be effective, while the NSSs consider B1, B2, B3, B5, B9, B10, B11, B12, B13, and B15 LLSs to be effective.

Table 5-a. Affective strategies of MSSs

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10
5	15	4	11	11	18	13	7	5	2	8
4	10	6	15	16	14	8	4	11	4	12
3	13	13	6	10	9	16	19	15	16	11
2	3	7	5	3	0	3	8	5	8	6
1	0	11	4	0	0	1	3	5	11	1
total	41	41	41	40	41	41	41	41	41	38
chi-square	20.34	6.68	10.59	20.75	32.29	19.85	19.85	10.34	15.22	10.16

** * *
 *p<0.05 **p<0.01 df=4

Table 5-b. Affective strategies of NSSs

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10
5	35	14	33	15	31	29	21	8	7	4
4	46	20	37	35	33	41	30	27	10	16
3	18	33	20	37	28	24	36	53	42	51
2	3	22	9	13	8	6	12	12	32	21
1	0	14	4	2	3	3	4	3	12	9
total	102	103	103	102	103	103	103	103	103	101
chi-square	78.10	11.81	40.45	44.67	38.12	49.57	32.78	79.28	46.56	67.07

** * *
 *p<0.05 **p<0.01 df=4

2)The significant differences are shown in B12 LLS ($p < 0.01$) and B2, B4, B8, B9, and B12 LLSs ($p < 0.05$).

6.3. Compensation strategies (see Tables 3-a, 3-b, and 7)

1)Almost all 10 LLSs indicate marked tendencies, but C3 and C9 LLSs of the MSSs don't show any marked tendencies. The MSSs consider C1, C2, C4, C5, C8, and C10 LLSs to be effective, while the NSSs consider C1, C2, C4, C5, and C10 LLSs to be effective.

2)The significant differences between the MSSs and the NSSs are shown in C6, C8, and C10 LLSs ($p < 0.01$).

6.4. Metacognitive strategies (see Tables 4-a, 4-b, and 7)

1)All 10 LLSs but D4 and D5 of the MSSs indicate marked tendencies. The MSSs consider D1, D2, D6, D7, D9, D10, and D11 LLSs to be effective, and the NSSs consider D2, D4, D5, D6, D7, D9, D10, and D11 LLSs to be effective.

2)The significant differences between the MSSs and the NSSs are shown in D5 and D6 LLSs ($p < 0.05$).

6.5. Affective strategies (see Tables 5-a, 5-b, and 7)

1)Almost all 10 LLSs indicate marked tendencies, but only E2 LLS of the MSSs doesn't show any marked tendency. The MSSs consider E1, E3, E4, E5, E6, and E10 LLSs to be effective, while the NSSs consider E1, E3, E4, E5, E6, and E7 LLSs to be effective.

2)The significant difference between the MSSs and the NSSs is shown in E10 LLS ($p < 0.01$).

Table 6-a. Social strategies of MSSs

	F1	F2	F3	F4	F5	F6
5	13	15	18	19	15	17
4	13	20	16	14	13	12
3	12	5	7	6	12	11
2	3	1	0	1	1	0
1	0	0	0	1	0	0
total	41	41	41	41	41	40
chi-square	18.88	38.39	35.71	31.56	24.73	29.25

** *p<0.05 **p<0.01 df=4

Table 6-b. Social strategies of NSSs

	F1	F2	F3	F4	F5	F6
5	23	36	38	33	17	30
4	32	35	44	48	32	31
3	34	26	17	18	45	38
2	9	3	3	3	8	1
1	5	3	1	1	1	1
total	103	103	103	103	103	101
chi-square	33.65	53.07	75.59	77.92	62.19	62.71

** *p<0.05 **p<0.01 df=4

Table 7. The difference of LLSs between MSSs and NSSs

Memory strategies

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
chi-square	5.10	10.38	11.04	9.28	13.83	12.71	3.77	2.28	5.56	13.84

Cognitive strategies

	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15
chi-square	4.57	9.59	4.72	9.65	9.24	5.79	1.19	12.76	11.95	5.05	5.02	17.07	8.57	6.63	11.99

Compensation strategies

	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
chi-square	5.36	1.63	6.45	3.92	6.47	20.42	3.51	15.73	4.93	24.66

Metacognitive strategies

	D1	D2	D3	D4	D5	D6	D7	D9	D10	D11
chi-square	12.34	6.40	4.65	7.85	10.91	12.30	2.63	8.61	6.96	4.02

Affective strategies

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10
chi-square	7.25	3.95	2.82	5.42	6.37	6.41	7.84	6.57	5.84	17.48

Social strategies

	F1	F2	F3	F4	F5	F6
chi-square	3.23	5.24	2.06	3.34	8.60	3.05

*p<0.05 **p<0.01 df=4

6.6. Social strategies (see Tables 6-a, 6-b, and 7)

- 1) All 10 LLSs indicate marked tendencies. All six LLSs are thought to be effective by the MSSs and the NSSs.
- 2) Both the MSSs and the NSSs consider all LLSs to be effective. As a result, no significant differences between the MSSs and the NSSs can be seen.

6.7. Other results (see each Table)

Statistically speaking, C6 LLS(avoiding communication) is considered to be ineffective by both

students. In addition, the other strategies which both students considered to be ineffective are A6, A7, D3 and E9 LLSs. And besides, A5 and C3 LLSs are considered to be ineffective only by the NSSs.

6.8. Summary

In summary, the following points can be remarked about the three research questions.

6.8.1. The first research question

The MSSs and the NSSs had strongly marked tendencies for the preferences of LLSs respectively, though the MSSs didn't have any marked tendencies for several LLSs, such as B2, B14, B15, C3, C9, D4, D5, and E2.

6.8.2. The second research question

There were some significant differences of LLSs between the MSSs and the NSSs in direct strategies, but few differences could be seen in indirect strategies, on the whole. In memory strategies, the MSSs thought that 'placing new words into a context' was effective but the NSSs thought that 'rote memory' or 'mechanical practice' was basically effective. In cognitive strategies, the MSSs thought that 'deductive thinking' and 'analyzing expressions' were effective but the NSSs thought that 'understanding sound-writing systems' and 'comparing English with Japanese' were effective when learning English, probably because their knowledge of English is rather inferior to the MSSs'. In compensation strategies, the MSSs considered 'using another means or knowledge' to be effective so as to compensate for their lack of English linguistic knowledge, but the NSSs could not help 'avoiding using English.' In metacognitive strategies, neither the MSSs nor the NSSs showed any significant differences about these LLSs, but there was one feature in which the MSSs thought 'goals' effective but the NSSs thought 'organizing' more effective than 'goals.' It means that the MSSs have a strong goal setting. In affective strategies, both the MSSs and the NSSs had a similar idea about these LLSs, but the MSSs thought that 'discussing with others' was more effective, but the NSSs didn't. In social strategies, there was no significant difference to identify.

6.8.3. The third research question

To solve the third research question, it is necessary to investigate what LLSs the MSSs and the NSSs have used in their English language classrooms. The most interesting thing was that, although they thought some LLSs ineffective, they are practically using the LLSs now or used them in the past. Therefore, the LLSs that they didn't think effective and they didn't use were extracted: A2, A5, A7, B4, B14, C6, C9, and E9 LLSs. If these LLSs are thought to be surely effective or helpful for the MSSs and the NSSs to learn English, and if they don't know how to use LLSs well, then English teachers may well teach these LLSs to the MSSs and the NSSs. These results will give good suggestions to the third research question.

7. Discussion

7.1. Are there any marked tendencies?

According to the results of the first research question, the MSSs and the NSSs have their own LLS preferences respectively. That might be because their goals or purposes of learning English are very clear and they are strongly related to their future jobs, such as doctors and nurses. The features of their LLS preferences will be stated as follows in summary:

- 1) The MSSs are likely to use more desirable LLSs, such as A3, C8, C9, and E10.
- 2) The NSSs have a common idea for LLSs as a whole, while the MSSs' ideas for LLSs are a little diversified, except for social strategies. The fact might indicate that the MSSs are better language learners than NSSs.
- 3) The MSSs as well as the NSSs didn't know well how to practically use several effective LLSs, but were just then aware of most LLSs by filling in these questionnaires. The fact is that they usually use traditional or simple LLSs when learning English: reviewing, translating, practicing, etc.
- 4) The MSSs take 'circumlocution' and 'approximation' for effective LLSs, but the NSSs don't. These LLSs have already been admitted as positive communication strategies (Sasajima 1991). The MSSs have more knowledge of English language than the NSSs. It means that even in oral communication, the MSSs' attitudes towards using effective LLSs are better than the NSSs'. In the end, linguistic knowledge might be very important for language learning.
- 5) The MSSs had strong awareness for 'goals,' while the NSSs regarded 'optimal learning conditions' as effective LLSs. And besides, the MSSs thought that 'discussing their feelings with others' was effective, but the NSSs thought that 'checking their learning conditions, stress, tension, fear, etc.' was effective. It might show very well the difference in their learning situations. Most MSSs strongly want to be doctors and then they have to study very hard for six years, but most NSSs are already doing their work as practical nurses in hospitals and still studying on to become registered nurses. Because of their busy daily life, they might always have to check their conditions.
- 6) Oxford says that 'writing a diary' is very helpful for language learning, but it seems that many of the MSSs and NSSs didn't think so. It means that they don't have much time to learn English so hard or they don't have such a strong motivation to learn English.
- 7) The MSSs as well as the NSSs thought that social strategies are effective. It means that they would regard social awareness as important or necessary. In other words, their social attitudes would be very appropriate for their future jobs.

7.2. Are there any differences of English LLSs?

Secondly, according to the results of the second research question, there may be a lot of suggestions to offer. Generally speaking, both the MSSs and the NSSs are going to work in the

medical field and so we are liable to have a stereotype for them; they have similar kinds of learning styles or use similar LLSs. But it is wrong. The fact is that they don't know how to learn English effectively. Some differences can be found in some LLS preferences, mainly in direct strategies.

Probably the differences come from their learning histories. In other words, the MSSs have studied very hard in order to pass the college entrance examinations for more than one year at least, but the NSSs haven't studied English so hard. That is to say, the MSSs have acquired some LLSs, especially some direct strategies, through the intensive English learning.

As in indirect strategies, there are very few differences between the MSSs and the NSSs. Among them, metacognitive strategies are thought to be very important and powerful for not only language learning but also other learning. According to the data, both the MSSs and the NSSs have a good aptitude for metacognitive strategies.

7.3. What LLSs can or should be taught?

Finally, by investigating the third research question which is based on Oxford's remarks that LLSs are teachable, I found that many of the MSSs and the NSSs are not aware of LLSs. They just follow some traditional and simple English learning at middle or high school, so as to learn English mainly for tests. Therefore, English teachers should introduce LLS awareness in the classroom. Take one LLS, for instance, 'semantic mapping.' It is very effective for pre-writing, but many students haven't used it so far. If teachers let them know it, they will surely use it effectively.

In the present-day English teaching at school, communicative language learning has been more focused for the past two decades, but teacher-centered classrooms seem to be still popular in fact. Moreover, learning English linguistic structures and translating into Japanese are very important work for their English learning. As a result, their learning styles are fixed or limited in the field-independent, reflective or not-ambiguity-tolerant styles.

Learning styles are said to be congenital traits and unable to be taught, but LLSs can be teachable. That is the point. And then how to teach LLSs effectively? Or what LLSs can be effectively taught? That is the question.

Brown (1994) offers three suggestions to bring learner strategy training into the classroom:

- 1) Students fill out a check list.**
- 2) They engage in frequent spontaneous hints about successful learning and communication strategies.**
- 3) They build strategic techniques.**

He still gives the ten commandments for good language learners. They can be helpful to build strategic techniques:

- 1) Lower inhibitions**
- 2) Encourage risk-taking**
- 3) Build self-confidence**
- 4) Develop intrinsic motivation**

- 5)Engage in cooperative learning**
- 6)Use right-brain processes**
- 7)Promote ambiguity tolerance**
- 8)Practice intuition**
- 9)Process error feedback**
- 10)Set personal goals**

These suggestions are based on learner-centered approach, so that, if students had no awareness or motivation for language learning, they would have no help or power eventually. However, the MSSs and the NSSs actually have needs to learn English. Many of the MSSs want to be good doctors who can use communicative English including English for medicine. The NSSs will also have to learn English so as to communicate with their patients or sometimes to share information with nurses in other countries through English.

Even in high schools, learner-centeredness has been getting more and more necessary and important. If so, it will be essential that learner-centeredness or self-access should be introduced into teaching English at college or medical school. That should be a must.

Now I will give some practical suggestions to what LLSs can or should be taught. The LLSs or proficiency levels between the MSSs and the NSSs are different as shown before. It would be better not to apply the same instruction to each of them as a whole, but to give separate suggestions to them respectively.

First I will give five helpful LLSs for the MSSs to use for self-access, based on this research. Then I will give ten helpful LLSs for the NSSs:

(to the MSSs)

- 1)to associate English words and phrases with sounds**
- 2)to make semantic mapping**
- 3)not to hesitate to write or speak as much English as possible**
- 4)to try to get the main idea or to summarize when reading or listening**
- 5)to make up new words when not finding appropriate words**

(to the NSSs)

- 1)to place new words into a context**
- 2)to make semantic mapping**
- 3)not to be afraid of making mistakes when communicating**
- 4)to try to get the main idea or to summarize when reading or listening**
- 5)to guess and use simple words or phrases**
- 6)to make ideas simple or easy**
- 7)to make up new words when not finding appropriate words**
- 8)to discuss learning with others**
- 9)to communicate first and to translate next**
- 10)to tolerate ambiguity and to use what is already known**

8. Conclusion

The question, 'Are LLSs teachable?' remains to be unanswered yet, even in many studies. Instead, there have been some instructional models proposed: Rubin and Thompson (1982), Jones et al. (1987), Chamot and O'Malley (1987), Ellis and Sinclair (1989), Oxford (1990), etc. But these models seemed to be still unstable. In other words, they couldn't always get successful results.

According to Chamot and O'Malley's remarks about their strategy training study (1990), they couldn't exclude other factors in spite of succeeding in teaching particular LLSs. And they say as follows:

The most important finding from this study was that while leaning strategies can be taught in the language classroom, the endeavor is neither simple nor always successful. Factors such as teacher interest and willingness to commit additional time to the instruction and the ability to maintain a high level of student motivation are critical to the success of learning strategy instruction.

Despite many studies or researches so far, LLSs are still unclear. But the most important thing is not to clarify what LLSs are defined as or to make the stable classification of LLSs, but to let learners learn how to effectively use LLSs.

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Appendix Language Learning Strategy Preference Questionnaire (the Japanese version)

英語の「学習方法」に関するアンケート調査項目

A 『記憶ストラテジー』について

英語の学習には記憶はつきものです。その記憶のしかたについての質問です。次の方法は効果的だと思いますか。

- 1 語句を覚えるのに、品詞や話題、機能や実用性、類似性などのようなグループに分けて覚える。たとえば、you, she, he, theyなどをまとめて覚える。
- 2 すでに知っている知識と関連づけたり、連想したりして覚える。たとえば、日本語と関連させて、語呂合わせにして、「worry, worry (わるいわるい) と気にする」など。
- 3 すでに知っている文、会話、談話などの中に、覚えようとする語句を入れて関連性を持たせて覚える。たとえば、libraryという単語を覚える場合、There are a lot of books in a libraryなどの文にして関連させて覚える。
- 4 覚えるときに、視覚イメージを使って覚える。たとえば、dogを「犬」の姿を頭の中に描いて覚える。
- 5 覚えようとする語句を他のすでに知っている語句と地図のように関連させて覚える。
- 6 音が似ていたり、スペルが似ていたりする語句と関連させて覚える。たとえば、oneとwon, something, anything, nothingなど。
- 7 覚えようとする語句をすでに知っている語句の音と関連させて覚える。たとえば、boat, coat, goat, floatなど。
- 8 一定の時間の間隔をおいて注意深く復習する。
- 9 身体を使って表現したり、自分の感覚や感情などと関連させて覚える。
- 10 覚えようとする語句をカードなどに写したり、また、整理したりして、覚える。

B 『認知ストラテジー』について

英語の意味を理解したり、英語を実際に使えるためには、やはり文法などを理解する必要があります。英語を理解するためにはどうしたらよいかという質問です。次の方法は効果的だと思いますか。

- 1 ある表現や文法項目を何度も練習したり、復唱したりして理解する。
- 2 発音などを理解するために、文字を見て読めるように練習する。
- 3 日常表現の決まった言い方や決まった文の形を覚えて使いながら理解する。
- 4 すでに理解している句などを組み合わせて、新しい句や文を作りながら文の構造を理解する。たとえば、take care ofとhave toを組み合わせて、I have to take care of my sister.など。
- 5 実際に英語にふれるために、実用の場に参加する。たとえば、英語の新聞を読む、手紙を書く、英語放送や映画を見る。
- 6 英語を読んだり、聴いたりするときに、関心のある特定の事柄だけをおおまかに理解するようにする。たとえば、「ざっと読む」、「必要な情報を読み取る」など。
- 7 英語を読んだり、聴いたりした情報を理解し、また、それに対応するために、あらゆる資

料を利用する。たとえば、さまざまな辞書、表現集、マスメディアからの知識。

- 8 一般的な、あるいは、基本的な英語の知識・規則を使って、英語の意味などを推測する。たとえば、houses が house の複数形だということを s から推測。
- 9 ある表現の意味を理解するために、一つ一つの語句の意味から推測して理解する。たとえば、fixed ideas の意味を、fixed (固定した)、ideas (考え) から理解する。
- 10 英語と日本語を比較しながら、英語の意味、文法、発音などを理解する。
- 11 英語を訳すことから理解する。
- 12 日本語の文法や知識などの似ている部分をそのまま英語に適用して理解する。たとえば、バイバイは英語の bye bye からの転移であることを利用する。
- 13 英語の理解に必要な大切な部分をノートに取り理解する。たとえば、分類し整理してノートをまとめる。
- 14 ある英語表現を要約したり、抜き出したりして、理解する。たとえば、タイトルをつける。
- 15 覚えたり、注意したりする語句や文に下線を引いたり、マーカーで色をぬったりして、焦点化して理解する。

C 『記憶ストラテジー』について

C-1

英語の意味を理解したり、英語を実際に使うときに、文法や語句などがわからないことがあります。そういうときに、推測したり、状況から判断したりします。このような英語の知識の不足を補うために、次の方法は効果的だと思いますか。

- 1 すでに知っている英語や日本語の知識を利用して推測する。たとえば、a pen や milk などから冠詞の使い方を理解する。
- 2 言葉ではなく、状況や話題などの周辺の知識を利用して推測する。たとえば、絵や図、あるいは、話している人の表情などから判断していく。たとえば、Oh, my God! など。

C2

英語を実際に話したり、書いたりすることはむずかしい作業になります。その際、意味を伝えるために、私たちはさまざまな工夫をします。どんな方法が効果的だと思いますか。

- 3 わからない語句があった場合、そのまま日本語を使う。
- 4 だれか他の人に聞いたり、辞書を調べたりする。
- 5 身ぶり手ぶりを使ったり、絵や図などを使う。
- 6 コミュニケーションを避ける。わからない話題は避けてしまう。
- 7 自分の知っている話題や関心のあることに話しを持っていく。
- 8 伝えたい内容を少し変えたり、ぼやかしたり、単純化したりする。知っている語句だけを利用して、相手に理解してもらう。
- 9 すでに知っている語句を組み合わせて新しい語句を造ってしまう。
- 10 わからない語句を遠回しに表現したり、意味の近い語句を使ったりして、相手に理解してもらう。

D 『メタ認知ストラテジー』について

英語を学習するにあたり、どうやって学ぶか、勉強するかということを計画します。どのように勉強するかということはとても大切なことです。次の方法は効果的だと思いますか。

- 1 自分の英語学習をふりかえり、すでに知っていることと関連させてこれからどう学ぶかを考える。
- 2 英語のある特定の重要な部分あるいは自分の関心のあることに注目する。たとえば、文法、語彙、発音、映画、歌など。
- 3 「聴く」あるいは「読む」ことに集中し、「話す」、「書く」は後で行なう。
- 4 他の人がどう学んでいるか、どう学ぶかを参考にする。
- 5 学ぶ環境を整備する。たとえば、机や本、ノートの整理、学習用具の整備など。
- 6 目標や目的を設定する。
- 7 いつも明確な目的を持って「読む、書く、聞く、話す」活動をする。
- 8 英語が実際に使われている場を求める。
- 9 自分の学習をいつも確認する。つまり、何を学んだか、何がわからないかなど。
- 10 自分の学習がどの程度進歩したかをいつもチェックする。

E 『情意ストラテジー』について

学習をする際には、感情、態度、動機などはとても大切な要素です。そのような感情をコントロールしたり、積極的な学習意欲を維持するために、次のようなことは効果的だと思いますか。

- 1 学習するときは、リラックスするようにする。
- 2 クラシックなどの静かな音楽を聞いて学習する。
- 3 学習の中に楽しいものを入れる。たとえば、おもしろい映画、コミックなど。
- 4 自分を勇気づける。「必ずできる、必ず覚えられる」などの肯定的な考え方をする。
- 5 間違いを恐れずに、どんどん自分の英語を試してみる。
- 6 テストなどの結果が良かったり、英語を聞き取れたり、英語でコミュニケーションができたりしたとき、自分をほめる。
- 7 体調が悪いと学習がうまくいかない。いつも自分の体調をチェックする。
- 8 自分の学習意欲、態度、感情などをいつもチェックする。
- 9 何をどう学んだかを日誌につける。
- 10 自分の学習状況を知るために、他の人に自分のことを聞く。

F 『社会的ストラテジー』について

英語はコミュニケーションするための道具です。言葉と社会との関係は切っても切り離せません。また、他の人と協力して英語を学ぶ必要があります。その際、次の方法は効果的だと思いますか。

- 1 自分の理解や表現が正しいかどうかを先生や友人にたずねる。
- 2 先生などに誤りを指摘してもらう。
- 3 友達と協力して学ぶ。あるいは、友達にわからないところをたずねたり、教えたりする。
- 4 英語の上手な人と積極的に交流し、自分の英語学習を助けてもらう。
- 5 自分とはちがう考え方や文化に理解を深められるような態度を身につけておく。
- 6 他の人の気持ちや感情にいつも理解を示せるように、他の人の意見に関心を持つ。