

【研究ノート】

## **A Report on the Step English Class : How to Use a CALL Package Effectively\***

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### I

In 1990, the department of English of Seisen Junior College started classes for Jitsuyō Eiken (Standard Test of English Proficiency, henceforth STEP) as an elective subject, changing the class name from “Practical English” to “STEP English” worth two units. In 1993, “STEP English” became a required subject for first-year students. The problem was how the teachers should manage classes of more than 40 students whose English proficiency varied. In the attempt to address this problem, the introduction of CALL (Computer Assisted Language Learning) into the class of STEP English was discussed in the computer-related education center of the school, resulting in the installing of 30 sets of software for the 1993 school year. I will report how I made use of this material to make my class as effective as possible, and how the students felt after using this material based on the results of the questionnaire which they completed.

### II

We purchased 30 sets of a CALL package named “Eiken Gōkaku Kōsu : Eiken 2 Kyū Taisaku (A Course for Passing the Second Grade of Step)” which was created by the TDK Co. This material consists of sections on 1) pronunciation, 2) vocabulary and idioms, 3) grammar, 4) sentence structure, 5) reading, and 6) listening. The overall material is composed of four rounds and each round is composed of four parts, each consisting of five questions. The students are to follow the procedure illustrated in Figure 1, which is designed to enable them to study for themselves.

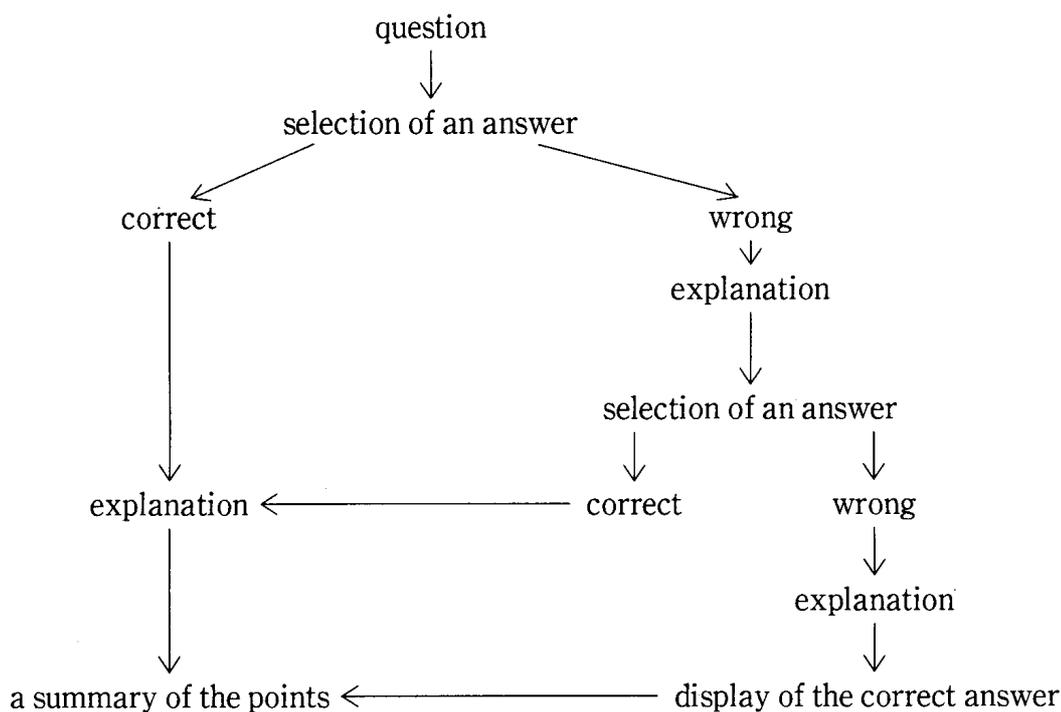


Figure 1. CALL package learning procedure

The material follows the past STEP tests in terms of the kinds and forms of the questions. This CALL package records a student's scores. When a student gives a correct answer, a circle is inserted into the corresponding space; when his/her answer is wrong in the first trial but correct in the second trial, a triangle is inserted; when neither the first nor the second answer is correct, an x is given. The total number of circles, triangles and xs are displayed in the column at the right side. Once the student has answered all the questions in a particular round, only those questions which he/she answered incorrectly are given again. When the student has finished them, a "\*" appears at the left side of the table. After this, if the student answers the same questions from the first to the last, his/her second score is recorded below the first score. If he/she studies the same round again, the new score is displayed below the first score erasing the second score. Figure 2 shows a score. The English translations of the items at the left end are Round 1, pronunciation, vocabulary, grammar, sentence structure, reading, and listening, respectively.

1 ラウンド	①	②	③	④	●	△	×
*発音	●△●×× ●●●×●	●●△△× △△●●●	●●●×△ △●●●△	●△●●× ●×●●●	10	5	5
*単語	●×●●× ●●×△△	●●●×● △●●●△	●△●×● ●●●●△	●●●×● ●●●●●	14	1	5
*文法	●●●●× ●●×●●	△●●△● △●●△●	●●△△× △●●△●	●●△●● ●●●●●	13	5	2
*作文	●●△●△ ●●●●●	△●●●△ ●△●●●	●●×●● ●●△●●	●●●△● △△●●●	14	5	1
*読解	△●●×△ ●●●●△	●×●△× ●●△●●	●●●×● △●●●△	●×△●△ ●●●●●	10	5	5
*ヒアリング	●△●● ●×●△	●●●△ ●●×●	×●●● ●●●●	×●●× ●●●●	11	2	3
					13	1	2

Figure 2. A score displayed on the screen

Though there were two sessions a week, on Thursday and Friday, the students used a computer only in the Friday sessions. Moreover, most of the time of the Friday sessions was spent in printing the students' scores and practicing the listening section, so they had to study the bulk of the material during their spare time by themselves. We also used a workbook, *Jitsuyō Eiken Mondaisyū* (The Workbook for the Second Grade of STEP) which is compiled from the tests conducted in the past five years. Every other week I instructed the students to study one of the tests in the workbook which I specified as an assignment at home and to note the numbers of the questions which they could not understand even if after looking at the explanations. In the Thursday sessions, I explained the questions which comparatively many students could not understand, judging from their responses. I administered achievement tests and short tests on the CALL package and on the workbook in the Thursday sessions. The students were required to study one round of the CALL package and one test of the workbook in two weeks.

III

I counted the total number of questions including those answered more than once which the students had studied on the CALL package. As I directed them to study sections on vocabulary and idioms, grammar, sentence structure, and reading, the questions they needed to study amounted to 80 for each round. In Table 1, the numbers in the column on the left side show the number of questions and those in

the upper horizontal column show the rounds.

Table 1. Frequency table of the number of questions studied

	R 1	R 2	R 3	R 4
~ 39	1	4	5	0
40~ 79	9	10	8	5
80~119	36	33	28	4
120~159	3	1	6	1
160~	3	4	5	41
Total	52	52	52	51

For example, a student who studied less than half of all the questions falls into the cell of “~39,” while a student who studied all the questions once falls into the cell of “80~119.” The reason why the number of the students who are in the cell of “160~” increased greatly in Round 4 is that I told them to study the round more than once and directed them to record on a form the date, time and the numbers of questions which they finished every time they used the material and to submit this form every Thursday.

I will compare the students' first scores with their second scores in Round 4, which most students repeatedly studied. Table 2 reports the total number of the students' correct answers for each section in their first and second attempts, the numbers in the upper column being concerned with their first try and those in the lower column with their second. This table shows the numbers of their correct answers which they gave in their first trial, i.e., the number of circles, in each study. Forty-one students who studied this round more than once are the subjects, and their records which they printed and submitted in Friday classes are used for this analysis. As each section consists of 20 questions, I made four divisions in Table 2. I also divided the number of the circles of all the students by 820 which is gained by multiplying the number of questions in each section of Round 4, 20, by the number of the subjects, 41, to calculate the average marks, which are represented at the right end of the table.

Table 2. Frequency table of student scores in Round 4  
Vocabulary and Idioms

	~ 5	6 ~10	11~15	16~20	Percent
1 st	8	19	10	4	45.5
2 nd	1	3	9	28	80.0

Grammar

	~ 5	6 ~10	11~15	16~20	Percent
1 st	1	22	10	8	55.0
2 nd	0	3	13	25	80.5

Sentence Structure

	~ 5	6 ~10	11~15	16~20	Percent
1 st	2	10	21	8	60.5
2 nd	0	2	16	23	79.5

Reading

	~ 5	6 ~10	11~15	16~20	Percent
1 st	6	19	14	2	48.0
2 nd	1	1	13	26	81.0

The students improved in the second study, in which they achieved the score of about 80% in all sections. In addition, though many students scored less than 11 except in the section on sentence structure in the first study, most students scored 11 or more and the students whose marks were in 16 to 20 range greatly increased

in number in the second study.

## IV

I advised the students to finish each round in two weeks, and administered a short test every other week in order to encourage them to study the CALL package and to assess their achievement. Each test covered vocabulary and idioms, grammar, sentence structure and reading of each round, but excluded pronunciation and listening. The time (15 minutes) and the number of questions (15 in all) were the same for all the tests. Table 3 shows the date, the number of the testees and the average mark represented in percentage. I also administered tests on the workbook. The tests covered the same kinds of sections and the same amount of questions as in the case of the tests on the CALL package. The time and the number of the questions were also the same in both kinds of tests. The results are given in Table 4.

Table 3. Average marks of short tests on the CALL package

	Date	Number	Percent
1 st	May 20	48	70.6
2 nd	June 3	48	64.7
3 rd	June 17	52	64.7
4 th	July 8	49	82.4

Table 4. Average marks of short tests on the workbook

	Date	Number	Percent
1 st	May 27	46	65.9
2 nd	June 10	48	65.7
3 rd	June 24	47	63.8

As for the CALL package, the students scored lower on the test of Round 2 than on the test of Round 1, and in Rounds 2 and 3 their scores were almost the same. They made dramatic progress in Round 4. The reason that the students performed worse on Rounds 2 and 3 than on Round 1, though the total number of questions they studied was approximately the same through these 3 rounds as illustrated by Table 1, seems to be that though they felt interest in using a CALL material at the start, their interest waned in the following rounds. The students scored good marks in the test for Round 4 since most students studied the round more than once while they

studied Rounds 1,2 and 3 only once. In contrast to the case of the CALL package, the scores on the workbook gradually decreased as Table 4 indicates.

In addition to short tests, the students took three achievement tests. The first one was conducted on April 10 before classes for this academic year started. The English Department of this school administers a placement test every year during the orientation period, and the test is composed of the questions of past STEP tests. I used this test as a pre-test to assess the students' proficiency in English. The second and third tests which were given on June 17 and July 8, respectively, were administered in the same way as in the case of the pre-test in terms of time (30 minutes) and kinds of questions (vocabulary, idioms, sentence structure and reading), each section consisting of five questions. As the numbers of the testees were not the same for all tests, I choose 50 students who took the three tests as the subjects to obtain data as precise as possible. The results are reported in Table 5 by showing the average marks represented in percentage.

Table 5. Average marks on the achievement tests

		Vocabulary	Idioms	Sentence Structure	Reading	Total
1 st	April 10	19.2	49.2	33.2	36.4	34.5
2 nd	June 17	36.0	46.4	34.4	27.6	36.1
3 rd	July 8	24.0	51.2	43.6	38.8	39.4

Comparing the scores of the first test with those of the second test, it should be noted that the score of reading dramatically dropped and that of idioms decreased in the second test, though the sentence structure score slightly improved and that of vocabulary sharply increased. Comparison of the second test with the third test shows that while the score of the vocabulary section decreased, those of the other sections improved. When the results of the first and third tests are compared, the scores of all the sections on the third test are the higher.

V

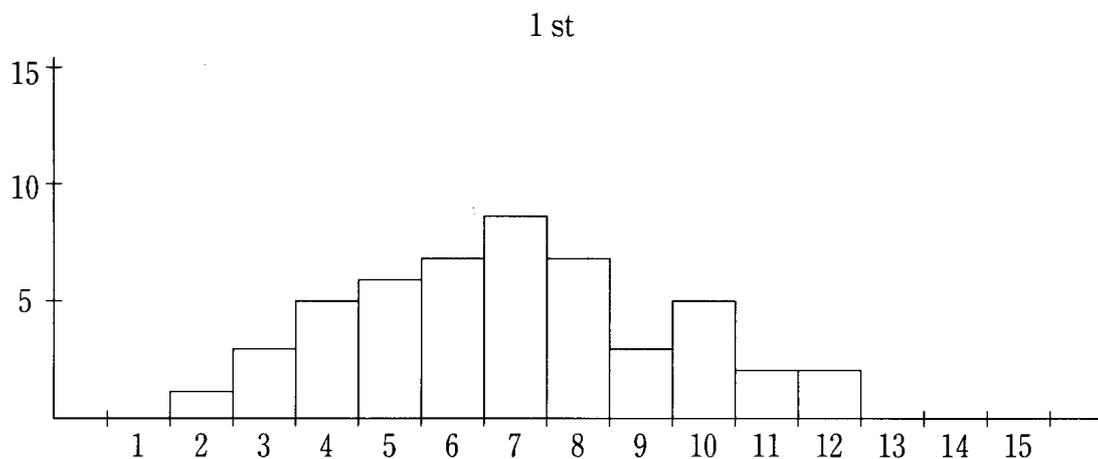
If the results of the achievement tests are seen in conjunction with those of the

short tests on the CALL package, a significant relationship can be viewed. The students performed well at the start as seen from their achievements both in the first achievement test and in the short test on Round 1. Their scores, however, fell both on the second achievement test and on the short tests for Rounds 2 and 3. They considerably improved both on the the third achievement test and on the short test for Round 4. It seems plausible to conclude that the parallel relationship between the results of the achievement tests and those of the short tests has much to do with how much they studied the CALL package. Table 1 shows that most students studied Rounds 1, 2 and 3 only once, while most of them worked on Round 4 more than once.

In Table 6, a figure indicates the number of the students who attained a particular mark in each achievement test, where the numbers in the top row represent marks. In each test, one question is worth one point, the full marks being 20. Table 6 is transformed into Figure 3 in which the numbers of the students are on the vertical axis and marks on the horizontal axis.

Table 6. Frequency table of student scores on achievement tests

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 st	0	1	3	5	6	7	9	7	3	5	2	2	0	0	0
2 nd	0	2	1	4	9	8	4	5	3	9	1	3	1	0	0
3 rd	0	1	3	4	3	8	8	3	5	4	4	2	1	2	2



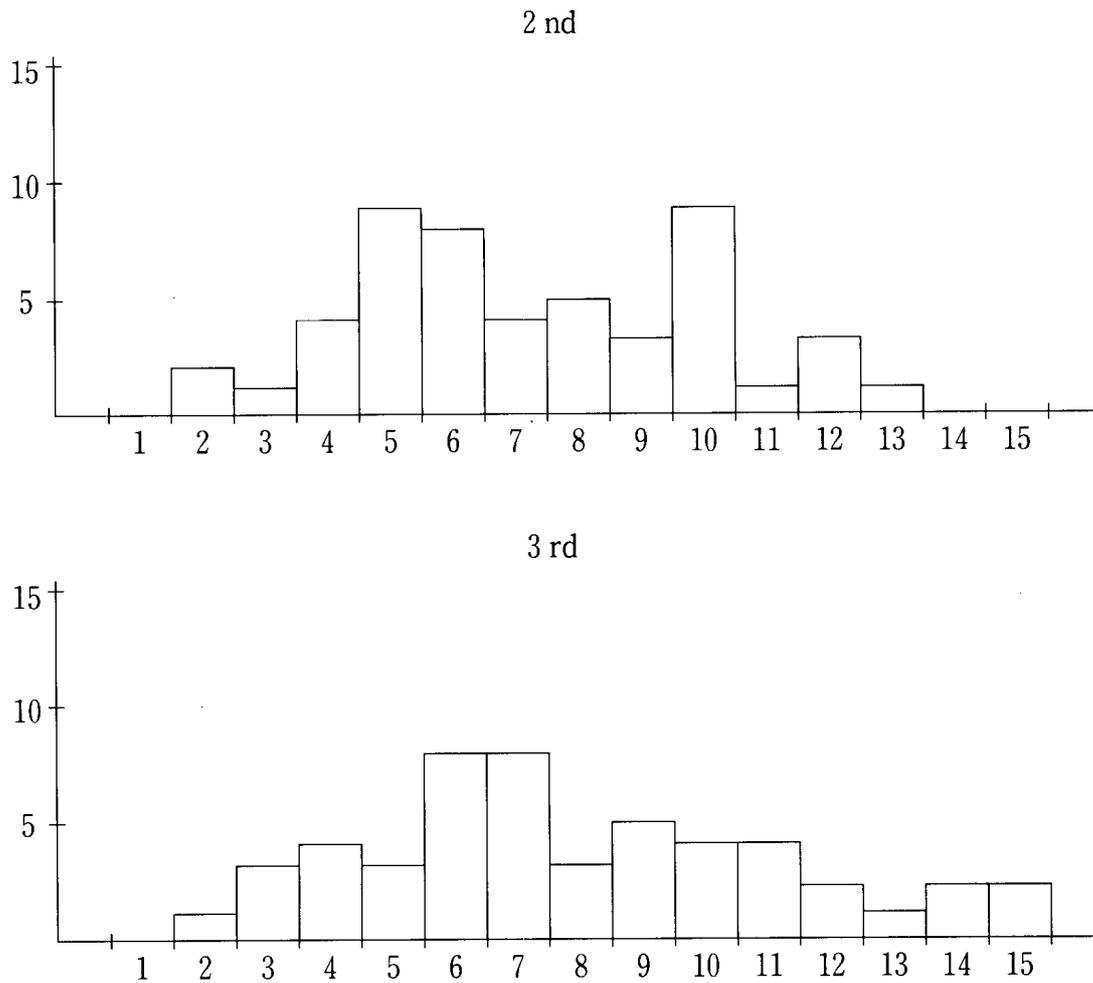


Figure 3. Histogram of Table 6 data

Figure 3 shows that the data values are nearly symmetrically distributed in the first test, where the highest point in the histogram is approximately in the center. On the second test, as many as 17 out of 50 students got 5 or 6 and the symmetrical distribution of the data set seen in the first test is disrupted, though 9 students got 10 in the second test. On the third test, the highest points again recovered grade of 6 and 7, and the distribution of the data is considerably evenly distributed. In addition, four students attained 14 or 15, though no students reached such high marks in the first or second test.

The analysis of the data concerned with the use of the CALL package suggests that although the material is designed for self-study by displaying instructions on the screen, the teacher should encourage them to study it repeatedly. As far as the students in my class are concerned, the teacher can not expect them to study it repeatedly even if he gives a short test on each round. I admit that the analyses of the results of the achievement tests presented in this report have some limitations.

Some of them are : 1) It might not be desirable to try to draw some conclusion from the result of a test which is composed of only 20 questions. This is especially true when analyzing the results of a section which consists of only five questions as in the discussion which was made based on Table 5, 2) It is not certain whether the level of the questions was the same in all the tests, and 3) Since the students attended classes other than the classes of STEP English, it is doubtful whether the data presented here reflects only the proficiency which they gained in the class.

## VI

I distributed a questionnaire on July 1 in my class to survey the students' impressions and opinions, and the questions were intended to compare the advantages and disadvantages of the CALL package and the workbook. The result of the questionnaire is shown in Table 7.

Table 7. Questionnaire of student opinions on workbook and CALL package

## 1. On questions

## A Workbook

1 difficult (22)

2 pretty difficult (25)

3 pretty easy (1)

4 easy (0)

## B CALL package

1 difficult (5)

2 pretty difficult (29)

3 pretty easy (13)

4 easy (0)

## 2. On explanations

## A Workbook

1 comprehensible (2)

2 pretty comprehensible (16)

3 not very comprehensible (21)

4 incomprehensible (9)

## B CALL package

1 comprehensible (16)

2 pretty comprehensible (26)

3 not very comprehensible (5)

4 incomprehensible (1)

## 3. On usefulness

## A Workbook

1 useful (4)

2 pretty useful (21)

3 not very useful (23)

4 useless (1)

## B CALL package

1 useful (9)

2 pretty useful (31)

3 not very useful (7)

4 useless (1)

4. On manipulating the CALL package
- |                     |                    |
|---------------------|--------------------|
| 1 easy (25)         | 2 pretty easy (20) |
| 3 not very easy (0) | 4 difficult (2)    |
5. Is it inconvenient that the CALL package is available only in the computer room?
- |                             |                            |
|-----------------------------|----------------------------|
| 1 inconvenient (17)         | 2 pretty inconvenient (23) |
| 3 not very inconvenient (7) | 4 not inconvenient (1)     |
6. On time spent for study
- A Workbook
- |                      |                    |
|----------------------|--------------------|
| 1 much (1)           | 2 pretty much (13) |
| 3 not very much (24) | 4 little (10)      |
- B CALL package
- |                      |                    |
|----------------------|--------------------|
| 1 much (5)           | 2 pretty much (20) |
| 3 not very much (22) | 4 little (1)       |
7. On motivation stimulated by the materials
- A Workbook
- |                      |                   |
|----------------------|-------------------|
| 1 much (2)           | 2 pretty much (6) |
| 3 not very much (29) | 4 little (11)     |
- B CALL package
- |                      |                    |
|----------------------|--------------------|
| 1 much (8)           | 2 pretty much (23) |
| 3 not very much (14) | 4 little (4)       |
8. On progress
- A Workbook
- |                   |                    |
|-------------------|--------------------|
| 1 fast (17)       | 2 pretty fast (23) |
| 3 pretty slow (5) | 4 slow (1)         |
- B CALL package
- |                   |                    |
|-------------------|--------------------|
| 1 fast (17)       | 2 pretty fast (28) |
| 3 pretty slow (2) | 4 slow (0)         |

The result of Question 1 shows that the students experienced more difficulty with the workbook than with the computer material. By the way, Tables 3 and 4 indicate that the scores of the short tests for Rounds 2 and 3 as well as those of the first and second short tests for the workbook are poor. This is the period when the students did not study the workbook or the CALL package hard. This suggests that both materials should be felt difficult if the students do not work with eagerness and that the difference which they felt about the two materials resulted from the different amount of time they spent in studying the materials. Question 2 reveals that the instruction of the CALL package is more helpful than that of the

workbook. The reason for this is that the former gives an instruction for each answer which the student inputs, while the latter gives explanations only on the important points. Though Question 3 may sound a little vague, most students seem to think that the CALL package is more useful than the workbook. This result also seems to reflect the students' opinion that the workbook is too difficult as compared with the CALL package. As shown in Question 4, the students soon became used to operating a computer. In the class on May 7, I explained to the students how they should use the material by giving them a handout. Most students seemed to have mastered the process in this session since detailed directions are displayed on the screen. Question 5 indicates one of the disadvantages of computer materials. As for Question 6, the number of students who spent 'not very much' or 'little' time studying the workbook amounts to 34 out of 48, though they could have studied it whenever and wherever they wanted. As for the CALL package, on the other hand, the number of students who answered 'much' or 'pretty much' is about equal to that of the students who answered 'not very much' or 'little' in spite of the fact that the students' use of the material was limited as the room for CALL was also used for other computer-related classes. It is worth noting that 10 students answered that they spent 'little' time for the workbook, while in the case of the CALL package there was only one. As seen in the result of Question 7, the students were more motivated by the CALL material than by the workbook. As for Question 8, the students seemed to be too busy in preparing for the short tests, for every Thursday they had to take a test on the CALL material or on the workbook.

## VII

This is the first year's report on the use of CALL material in a STEP English class. The students seem to take an interest in using a computer for studying English. The material has the advantage of providing individual instruction for each answer. This is not the case when teaching many students in a classroom where the teacher is obliged to restrict his instruction to the items which he thinks to be important to most students. The advantage of CALL does not mean that the instructor has little work to do. The teacher has to encourage them to study the material repeatedly by offering a guideline for them to follow since the effectiveness of repeating the material is suggested by the data presented in this paper. The instructor is also required to give effective advice to each student by referring to the test results. The role of the instructor of a CALL class will be a subject which needs research and concentration in the future to put CALL

materials to good use.

\* I wish to express my gratitude to Professor Shū Takahashi, the chairman of the computer-related education committee, who gave me illuminating comments on conducting my class and on analyzing the data.