

Report on Computer Assisted Language Learning in University Classroom

コンピューターを利用した英語教育の効果

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Abstract

In the area of English as a Second Language (ESL), Computer Assisted Language Learning (CALL) is catching the interest of researchers. The findings, however, are not always favorable. In this report, students' experiences in an attempt at utilizing computers as English learning are described. At the end of the report, needs of future research are mentioned.

要 旨

英語教育において Computer Assisted Language Learning (CALL)は学習ツールとして注目を集めている。だがその評価はいまだ定まっていない。ここではアンケート調査を行い、学習者が CALL をどのように受け止め、評価しているかを報告する。今回の調査では分からなかった点から、今後の調査の必要性に言及している。

Keywords: CALL, Learning Motivation, Survey, Effectiveness

キーワード : CALL, 学習動機, アンケート, 効果

1. Introduction

Since the 1980s, improvements in computer assisted language learning (CALL) have mirrored the overall development of the computer itself. The investigation of CALL has been one of the objectives of the language learning research for more than 20 years (Chapelle, 2001; Son, 2004). So far, we know CALL is effective in vocabulary and writing. As for skills, such as reading, speaking, and listening, the findings are not very stable yet (Chou, 1999). In this report, the perceptions of the learners' are investigated through a simple survey.

2. Methodology

This project was designed to gather data needed to define the current system. A student survey was chosen to investigate present students' perception of the current practice. It was collected from several classes.

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There were total of 16 questions on the both sides of the survey sheet. The questions are shown in Appendix A. The first 4 questions asked about students' individual data: year they are in, length they used the system, if they had used computer to learn English in junior and senior high schools, and frequency of their computer use at home. The other twelve questions concerned; (1) effectiveness of CALL, (2) motivation to learn English, (3) building study habits, and (4) feelings about the system. There was also a space to write about their experiences of learning English by computer. Seventy one students answered the survey.

3. Results

Fifty nine out of seventy one students who answered the survey were in their first year, 2 in the second, and 2 in the third year. Eight students did not indicate which year they are in. Six students said they used the computer program from the last year's December to this December, 38 from April to July, and 15 from April to this December. Fifty two students said they did not use CALL in either junior or senior high schools and 9 said they did. Twelve of the respondents always use the computer at home, 15 often use, 18 use sometimes, 8 rarely use, and 9 never use computer at home.

The respondents were asked to answer the questions from 5 to 16 using a 5-point Likert scale, with 5 showing the strongest agreement of the participants'. The averages of each question are shown in Table 1.

Table 1: Averages of Q5-Q16 (N=71)

Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
3.51	3.61	2.85	2.90	2.93	2.31	3.01	2.91	2.94	3.12	3.51	3.01

As a whole, the answers are not very widely distributed. Even with Q10, a negative sentence question, the range of the averages is in 1.3. Therefore the differences are not significant, and we can only talk about the tendency among those students.

Questions 5, 6, 7, 15, and 16 are about the effectiveness of CALL. The averages of these questions are rather in the higher half of the distribution range, with exception of Q7. This question concerns learning grammar.

Questions 8, 9, 10, and 11 are about their motivation, with a negative sentence question, Q10. The averages are about 2.9 to 3.0, except Q10.

Question 12 asked about if they acquired study habits through CALL. Question 13 is about how they felt about the length of study using CALL, and Q14 is about if they liked to use this computer program to study more.

These results cannot illustrate the participants' perceptions of CALL in sufficient depth. Using Q1-Q4 as the cross reference factors, the results of Q5-Q16 are re-analyzed. When Q1 is used as a category, the results are shown in Table 2.

Table 2: Q1 Year in College

Year	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
1 (83%)	3.51	3.61	2.73	2.85	2.85	2.34	2.98	2.89	2.86	3.09	3.51	2.95
2 (3%)	3.50	3.50	3.00	3.50	3.50	1.00	3.00	3.50	4.50	2.50	4.50	4.50
3 (3%)	3.00	3.00	3.00	2.50	3.50	2.50	3.00	1.50	3.00	2.50	3.00	2.50
Other (11%)	3.63	3.75	3.63	3.25	3.25	2.38	3.25	3.25	3.13	3.63	3.38	3.25

Since the numbers of the 2nd and 3rd year students are very small, comparison is very difficult. With that in mind, as a whole 2nd year students seem to assess the effectiveness of CALL higher than other students did, except for the students who did not indicate their years. As mentioned before, Q5, Q6, Q7, Q15, and Q16 are about the effectiveness of CALL. Especially Q7, about learning grammar, and Q16, about learning reading, 1st year students did not appreciate the effectiveness of CALL. As for motivation, Q8, Q9, Q10, and Q11, 1st year students tend to show lower appreciation than other students. Second year students and students who did not indicate their year felt they acquired a habit to study English regularly (Q12). Second year students strongly felt the length of using CALL to learn English was long, Q13, but the 1st year students did not feel so. The students who did not indicate their years said they wanted to use this computer program to study English more (Q14), but 2nd and 3rd year students did not feel so.

The length of study is an important factor. About half of the participants experienced CALL for one term. In this term all of the first year students were assigned to use CALL, so the students who used CALL from December to March are expected to use it also from April to July. Therefore they are experiencing CALL from December to July. Comparing this group to the group of the students who used CALL for one semester, from April to July, the first group expressed more appreciation to the effectiveness of CALL. Their motivation is indicated higher than the second group. It is easy to understand the first group said the length of study was rather long for them. Interestingly they said that they wished to use this computer program more.

The third group used CALL from April to January, for two terms. Comparing this group to the first and second groups, this group showed interesting results. As for the effectiveness of CALL, Q5, Q6, and Q7, the third group showed the lowest points, but they said CALL was beneficial for heightening their listening proficiency. This group also assessed the effectiveness of CALL on their reading proficiency rather highly.

This group said that their motivation was moderately heightened. They also indicated they formed English study habits. These students felt the length of study was long. They did

not express to wish to use this computer program any longer.

Table 3: Q2 Length of Study

Months	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
12-3 (9%)	4.00	4.33	2.83	3.33	3.33	1.33	3.17	2.83	2.33	4.00	3.67	3.83
4-7 (54%)	3.47	3.53	2.71	2.71	2.66	2.47	2.84	2.73	2.68	2.97	3.30	2.84
4-7& 10-1 (21%)	3.33	3.47	2.67	3.00	3.13	2.07	3.21	3.29	3.79	2.79	4.07	3.00

The third factor is their experience of using CALL in junior and senior high schools. Except listening proficiency, the students who had not used CALL in either junior or senior high schools evaluated its effectiveness higher. They felt the length of study was long more than the students who had used CALL before did. The students who had used CALL in junior and senior high schools felt they became more aggressive to learn English before they used CALL in college.

Table 4: Q3 Use of CALL in Junior and Senior High School

Use of CALL	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
Yes (73%)	3.42	3.56	2.67	2.83	2.92	2.25	2.94	2.88	2.82	3.02	3.59	2.96
No (13%)	3.78	3.67	3.00	2.89	2.44	2.44	3.13	2.63	3.38	3.00	3.00	2.88

The last factor is the frequency of computer use at home. As for the effectiveness of CALL, the students who rarely use computer at home showed the lowest averages in most of the effectiveness questions.

As for motivation, the students who always use computer at home said they became more active to learn English and felt more fun in learning English. And their answer to Q10 is low enough to conform that their motivation to learn English is heightened. Other groups also show the similar pattern, high in the answers of Q8, Q9 and Q11, and low in Q10.

As seen in the previous section, four factors, Q1, Q2, Q3, and Q4, affected the results. How do they affect on the averages of the results of the questions from Q5 to Q16? If the difference between each group is large, it means that factor has a strong affect. The results are rounded off to two decimal places, and the results of the group who did not mention their year

was not included in Q1.

Table 5: Q4 Frequency of Computer Use at Home

Frequency	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
Always (17%)	3.58	3.75	2.83	2.75	3.33	2.17	3.17	2.83	3.17	3.08	3.58	2.83
Often (21%)	3.73	3.73	2.87	2.93	2.60	2.20	2.79	2.86	3.00	3.21	3.50	2.79
Sometimes (25%)	3.44	3.67	2.56	2.89	2.94	2.44	2.94	2.94	2.82	3.00	3.65	3.06
Rarely (11%)	2.88	2.88	2.38	2.63	2.63	2.25	2.88	2.63	2.88	2.50	3.00	2.88
Never (13%)	3.56	3.56	3.00	2.89	2.78	2.22	3.11	2.89	2.67	3.13	3.67	3.33

Table 6: Comparison of Differences

	Ave.	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
Q1	1.02	0.51	0.61	0.27	1.00	0.65	1.50	0.02	2.00	1.64	0.59	1.50	2.00
Q2	0.79	0.67	0.87	0.17	0.62	0.68	1.14	0.38	0.56	1.45	1.21	0.77	1.00
Q3	0.27	0.35	0.11	0.33	0.06	0.48	0.19	0.18	0.26	0.55	0.02	0.59	0.09
Q4	0.57	0.86	0.88	0.63	0.31	0.73	0.28	0.38	0.32	0.50	0.71	0.67	0.55
Ave.	0.66	0.60	0.62	0.35	0.50	0.63	0.78	0.24	0.78	1.04	0.63	0.88	0.91

The most influential factor is the students' years in college. The second strong factor is the length of use of CALL in college. These two factors are related each other. CALL was introduced in the classroom two years ago and the way of employing it is different from term to term. This survey itself was targeted the first year students and collected in the classes for them, not for other year students. In this sense, Q2 is more promising than the Q1. Large differences, more than 1.0, are seen in the answers of Q13, Q14 and Q10. Q13 asked about if they felt the length of study using CALL long, and it seems there is a large difference, 1.45, depends on how long they used the program. Q14 is also about the program. It asked if they wanted to use this computer program more to learn English. The result of Q10 indicated that some students felt they rather lost their interests in English using the program, and others did not feel so. To investigate this point, we need verbal data collected through interviews.

The results of Q13 are different across the categories. The average of the differences among groups, 1.04, shows that the participants felt the length of use of CALL differently. Again, we need more investigation to gain a clearer picture of students' experiences.

As for the effectiveness of CALL, it seems that the participants indicated it was effective. As seen before, Q7 is rather special and did not show a large distribution. Other

exceptions are the results of Q15 and Q16. They are slightly widely distributed, 0.88 and 0.91, compared to the other effectiveness questions', such as Q5 and Q6. To understand what is going on here, we need the students' English proficiency to be checked before and after the course. Motivation is rather stable between categories.

4. Conclusion

From those results, we can see a unique picture. The participants evaluated the computer program they used in class as effective, but their motivation to learn English has not elevated. There are mainly two possible explanations. First, there might be a problem in the tool. Perhaps the right questions were not asked. Probably the questions used did not convey the researcher's intentions correctly.

Second, there might be a time lag between when they recognize the effects of learning and when they are motivated. It is as if their extrinsic motivation were not yet changed into intrinsic motivation. To see how their motivation orientations change, we need a long-term research.

This report could not illustrate how students experienced CALL well enough. We need to investigate their experiences more deeply with more accurate tools. Understanding how their motivation to learn English changes is a must for utilizing CALL in the classroom.

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Appendix A: Survey Questions

Q1: (7A 生以上・8A 生・9A 生)

Q2: このコンピュータープログラムを使った期間は? (昨年 12 月から 3 月まで・春学期・春学期と秋学期)

Q3: 中学・高校では E-learning を(取り入れていた・取り入れていなかった)。

Q4: 自宅ではコンピューターを

(いつも使っている・よく使う・時々使う・あまり使わない・全然使わない)。

以下の各文について、「1.全くそう思わない」「2.あまりそう思わない」「3. どちらでもない」「4. ややそう思う」「5. 非常にそう思う」のうち、該当する番号を 1つ選び○で囲んでください。

Q5: 英語の学習全般に役立った。

1	2	3	4	5
<div style="display: flex; justify-content: space-between; width: 100%; margin: 0;"> 全くそう思わない 非常にそう思う </div>				

Q6: 英語の語彙の習得に役立った。

Q7: 文法の習得に役立った。

Q8: 以前より英語が好きになった。

Q9: 以前より英語の学習に対して積極的になった。

Q10: 英語の学習をする気がなくなった。

Q11: 英語を学ぶことが以前より楽しくなった。

Q12: 英語を学習する習慣がついた。

Q13: 学校での e-learning の学習期間は長かった。

Q14: もっとこのコンピュータープログラムを使って学習したい。

Q15: 英語を聞く力の向上に役立った。

Q16: 英語を読む力の向上に役立った。

E-learning に取り組んだ感想や意見を自由に記入してください。