

The Effectiveness of Using CALL Environment on Reading Skills of English Learners

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Abstract. It is well-known that the computer and the Internet technology offers numerous advantages to English language teaching and learning. This paper aims to testify the efficiency of English language reading teaching in a university in Northeastern China as well as prove how to help college students promote their reading proficiency including their autonomous learning abilities by the effective use of CALL (Computer Assisted Language Learning). A total of 120 Chinese EFL (English as a Foreign Language) learners were randomly assigned two experimental and control classes. The teaching experiment lasted one semester (17 teaching weeks). The CET (College English Test (in China)) Band 4 Reading Test was adopted to test both classes as the pre- and post-test. The findings show that the experimental class had great achievements in terms of reading comprehension ability than the control class due to the use of CALL classroom and the student centered approach.

Introduction

Reading is often considered as a very important receptive skill in English language teaching. For a long time, traditional English teaching in China has been dominated by a teacher-centered, examination-oriented, grammar and vocabulary-based method (Ding, 2012) [1]. Based on the traditional teaching method, the college English teaching course is becoming more utilitarian. Therefore, numerous educators hold that the current college English teaching in China should be changed and reformed. In addition, the new teaching methods should be more effective in order to meet the needs of both the society and the students. In particular, the effective use of Computer-Assisted Language Learning (CALL) might enable reading teaching to be progressive, versatile and responsive to individual learning needs. It is proposed by many researchers and educators that CALL is one of the most important ways to concentrate the power of the computer technology on cultivating the students' potential to become effective and independent readers.

This paper aims to testify the efficiency of English language reading teaching in a university in Northeastern China as well as prove how to help college students promote their reading proficiency including their autonomous learning abilities by the effective use of CALL.

Previous Research on Teaching Reading by the Use of CALL

Numerous previous research all the over world confirms that CALL facilitates second language learners' reading skills in English and that the improvement of reading comprehension can be realized by the effective use of CALL.

In 1990s, more research on reading teaching and CALL was undertaken. Chun and Plass (1996) [2] investigated that how the students' reading ability can be helped with the application of CALL like the multimedia to language teaching. They studied the effects of a dynamic visual advance organizer on the macro level and the impacts of multimedia annotations for single vocabulary items on the micro level. They also examined the correlation between the students' ability of vocabulary acquisition and reading comprehension, finding that learners' overall reading comprehension was enhanced positively by the application of multimedia. Recently, Meihami and Varmaghani (2013) [3] investigate the effect of incorporating CALL materials in ESL (English as a Second Language) reading comprehension classrooms. In their research project, the comparison between the

experimental and the control group indicates that CALL materials promote reading comprehension skill among EFL low advanced students, including more positive attitudes towards CALL from the majority of the students. Similarly, Marzban's study (2011) [4] suggests that using CALL techniques can enhance students' reading comprehension, in comparison with the traditional teaching approach. In brief, CALL teaching has been developed for about fifty years. The studies have got a great achievement in the continuous development of technology, linguistic, and the theories abroad. These studies play a very vital role in putting theory into English language teaching and learning practice as well as guiding the development of Chinese multimedia network technology in English teaching research.

Although China developed the study on CALL more lately than some other countries such as the US and the UK, there have been a great deal of effective research on College English Teaching reading until now. Gu (2010) [5] undertook empirical research to prove the high efficiency of the new teaching reading model that she had created with CALL. Liu (2012) [6] conducts a new approach to English reading instruction assisted by CALL, arguing that only teachers could understand clearly how and when to make good use of the computer and the Internet properly, which help students to promote reading learning. Another study undertaken by Hu (2007) [7] makes an exploration on the use of the student-centred pedagogy in a technology-rich language learning environment, which indicates that the vital role of instructional technology in improving Chinese students' reading in English. These studies confirm that the great significance of the use of the modern technology in education is to push the promotion of English language teaching and learning in the Chinese context.

It is obviously that the application of CALL on English learning and teaching has various benefits, especially the application of multimedia. One main advantage is the abundant resources provided by the computer and the Internet, such as text, graphs, animation, video, computer data and online libraries, e-journals and so on. In addition, these resources are always authentic materials that are more easily understood by students. More importantly, many websites are designed for English learning, combining listening, speaking, reading, and writing together in order to help students grasp comprehensive English knowledge and skills.

Research Methodology and Instruments

This section presents the research design of applying CALL in English reading teaching in a university in Northeastern China, including the research participants, instruments and the experiment procedure.

This research project was undertaken in the EFL (English as a Foreign Language) context in a university in the second semester of the 2014-2015 academic year and there were 17 weeks of teaching activities. The research participants consisted of 120 freshmen, with the average age 18 years old. The two classes chosen randomly were called the Experimental Class (EC) and the Control Class (CC) respectively, with 60 students in each class. The two classes were taught by the same teacher and their English proficiency was similar before the experiment. The research methods such as questionnaires, interviews and pre- and post-testing measuring tools were adopted in this research project. The teaching experiment lasted one semester (17 teaching weeks).

At the beginning of the reading course, besides the questionnaire investigation, the teacher tested the levels of the students' reading comprehension at the same test paper in order to diagnose the students' strengths and weaknesses in their reading abilities, which might help the teacher identify the teaching key points and the students' weaknesses, which would be addressed in later teaching. The CET (College English Test (in China)) Band 4 Reading Test was adopted to test both classes as the pre- and post-test.

The students of the Control Class were required to attend 4-hour reading course per week in a traditional classroom, with the blackboard and chalk as main teaching devices. They were taught mainly in traditional teaching methods such as the teacher-centered approach. On the contrary, the students of the Experimental Class just attended 2-hour reading course per week in a multimedia network classroom with the student-centered teaching approach. Regarding the other two teaching

hours, they just studied completely by themselves in the autonomous learning classroom with computers connecting to the Internet plus some learning software and online practice. They were also entitled to visit the website related to the textbook and they could select any learning resources according to their individual needs and interest. Additionally, effective learning methods and strategies were taught in the EC Class and some learning materials from useful English learning websites, such as the BBC learning English website, were strongly recommended to them for their autonomous learning outside class.

Findings and Discussion

The research findings were generated from data collected at the end of that semester by using student questionnaires, interviews, and pre- and post-testing measuring tools. Of the 120 completed questionnaires, 60 were from the Experimental Class and the rest (60) were from the Control Class. Table 1 shows the students' perceptions towards motivation, autonomy and CALL learning environment in learning English. They were required to choose one answer to indicate the extent to which they either agreed or disagreed with a statement, Lettered, Strongly disagree, Disagree, Unsure, Agree, Strongly agree. There were 10 statements in total. As can be seen in Table 1.

Table 1. Students' attitude towards motivation, autonomy and CALL learning environments

| Questions | Class | Strongly agree | Agree | Unsure | Disagree | Strongly disagree |
|--|----------|----------------|-------|--------|----------|-------------------|
| (1) Lively online practice tests enhance my motivation in learning English. | EC(n=60) | 66% | 34% | 0 | 0 | 0 |
| | CC(n=60) | 45% | 32% | 23% | 0 | 0 |
| (2) University computers and networking facilities have positively affected my English learning autonomously. | EC | 36% | 31% | 33% | 0 | 0 |
| | CC | 25% | 28% | 47% | 0 | 0 |
| (3) Reading English on the Internet is one of the most effective ways to improve reading. | EC | 62% | 38% | 0 | 0 | 0 |
| | CC | 47% | 21% | 32% | 0 | 0 |
| (4) Using CALL environment is one of the most effective ways to learn English. | EC | 58% | 42% | 0 | 0 | 0 |
| | CC | 44% | 36% | 20% | 0 | 0 |
| (5) The university classroom with CALL equipment will improve my English reading proficiency. | EC | 72% | 28% | 0 | 0 | 0 |
| | CC | 48% | 23% | 29% | 0 | 0 |
| (6) The English learning websites that my teacher recommended is helpful to my English study. | EC | 58% | 33% | 9% | 0 | 0 |
| | CC | 54% | 27% | 19% | 0 | 0 |
| (7) My teacher's advice on English learning strategies and autonomous learning is helpful to my English study. | EC | 59% | 33% | 8% | 0 | 0 |
| | CC | 48% | 25% | 27% | 0 | 0 |
| (8) The student-centered approach is helpful to my English study. | EC | 74% | 26% | 0 | 0 | 0 |
| | CC | 41% | 21% | 17% | 21% | 0 |
| (9) The teacher-centered approach is helpful to my English study. | EC | 11% | 24% | 22% | 43% | 0 |
| | CC | 31% | 18% | 35% | 16% | 0 |
| (10) The CALL learning environment is more important than any other good teachers or teaching approaches. | EC | 68% | 32% | 0 | 0 | 0 |
| | CC | 44% | 25% | 31% | 0 | 0 |

Note: (1). (n=60) means that 60 students answered the questionnaire correctly, and their answers are summarized here. 'n' represents 'number'. (2). EC=Experiment class; CC=Control class

The significant difference between the two classes was found to show that the experimental class

had more positive perceptions in terms of the students' motivation, the autonomous learning and the effective use of CALL, except the teacher-centered approach. Also, Table 2 indicates that the experimental class had greater achievements in terms of reading comprehension ability than the control class due to the use of CALL classroom and the different teaching approaches. The findings of the current study confirmed the ones obtained by some research undertaken previously. For example, Bhatti (2013) [8] has found that using CALL environment was much more effective than the traditional instructor-led class. Also, the findings of this present study are in line with Benson's claim (2011) [9] that autonomous learning is more effective than non-autonomous learning and the development of learner autonomy implies their better language learning.

Table 2. Statistics of the Pre-test and Post-test Results of the Reading Comprehension

| | Number of students | (Full Mark: 100 points) | Total scores | Mean | Increased by (%), in comparison with pre-test |
|--------------------|--------------------|-------------------------|--------------|------|---|
| Experimental Class | 60 | Pre-test | 2958 | 49.3 | 20.8% |
| | | Post-test | 4206 | 70.1 | |
| Control Class | 60 | Pre-test | 3072 | 51.2 | 7.5% |
| | | Post-test | 3522 | 58.7 | |

After the quantitative analysis above, it has drawn the conclusion that the new teaching method has brought a positive effect on participants' English reading proficiency as well as their interest and autonomy. However, the qualitative analysis is essential indeed which can make the whole experiment more complete and persuasive.

Based on the interviews (16 students chosen voluntarily from each class), all the representative opinions are collected and recorded in terms of the interviewees. The questions of the interview are listed as below: (1) How do you feel such a CALL environment? (2) What's your attitude towards this teaching approach? (3) Can on-line learning give you more help and more improvement in your study? (4) Do you like to stay longer in the CALL classroom and what do you usually do on the computer or on-line besides class-learning? (5) What can you learn from the English reading class? (6) To what extent does the new teaching mode improve your reading proficiency?

Nearly all the students in EC class showed positive attitude towards multimedia network teaching. They stated that they had learnt a lot from this course. The most important thing was that this course helped them to improve their English reading ability and develop more cultural awareness and knowledge. The CALL environment was very important for them to resume their self-confidence, because they did not feel stressful and they could learn freely, comfortably and creatively. The CALL classroom motivated their activity in learning English. They enjoyed themselves very much in this course. They liked the feeling as a controller and a planner, rather than just a receiver.

Only one student came from EC explained that both the old and new method were the same to her. She still could not follow the teacher or catch up with others which made her sad and it was difficult for her to learn online because she could not operate the computer very skillfully. She hoped in the following days that she could accept the new method and set up a positive attitude towards English reading. Additionally, some boys recognized that they often got lost when surfing on the internet because there was a great deal of other information which attracted them more than English language learning such as movie stars.

The feedback from the interviewees indicated that multimedia teaching method in English reading had gained the significant effects. Virtually all the interviewees reflected that the new method could stimulate their interests and form a positive attitude toward English reading which was the foundation for the further study. Most important of all, their English reading proficiency has been improved prominently. Furthermore, the time of experiment lasted too short for this kind of students to some extent. As a consequence of the experiment, it is still needed to be improved in further research.

According to the result of the interviews, some main findings are as follows: 1) Higher motivation and autonomy lead to greater improvement in English proficiency by learners. 2)

Technologies such as computers and the internet are the best teachers for learners to learn English autonomously. 3) Using technology appropriately is one of the most effective ways to learn English. The findings have been approved by Liu (2014) [10].

Conclusion

The findings of the present study have been again approved that the modern technology is one of the most effective ways to improve students' English proficiency in the EFL (English as a Foreign Language) context, combining with the higher motivation and autonomous learning abilities. Also, the findings of this research project can be applied by language teachers where the computer and the Internet are available so that the technology-enhanced equipment can be more effectively used in order to promote students' comprehensive English proficiency very fast.

CALL as a modern teaching method is paid more attention by more teachers and students. CALL which has characteristics of large capacity, visual image, the fast speed as well as efficiency can stimulate students' interest in learning and make classroom atmosphere active. Thus, the efficiency of classroom teaching is significantly improved. In the computer-assisted English reading teaching model, students are acted as the teaching center, the teacher-student interaction are strengthened, students' reading motivation is enhanced and students' reading strategies are improved. In this way, students' major reading knowledge and enthusiasm are stimulated. However, there exist some problems in the computer-assisted English reading teaching. Additionally, some teachers cannot use the computer skillfully or abuse the multimedia. Therefore, English teachers should pay attention to overcoming these problems and learn to use multimedia properly and combine with other teaching methods to improve the efficiency of English teaching in the future.

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