Enhancing the EFL learning environment through CALL: Implementation and evaluation

Gu Peiya, Suzhou University
E-mail: pygu@suda.edu.cn

Abstract

Drawing on project-based CALL literature, this paper reports a CALL implementation study at Suzhou University, based on the model of optimal language learning environments. With empirical data support, the paper discusses the potential of project-based CALL in optimising the EFL learning environment. The findings indicate that well-organised CALL activities can improve authentic interaction with a variety of audiences and can help design meaningful tasks for language exposure and language output. They can facilitate effective feedback and encourage intentional cognition, increase motivation and engaged learning, as well as promote a collaborative atmosphere and enhance learner autonomy.

Keywords

EFL learning environment, CALL, project-based learning.

Introduction

In China, where the learning of English is conducted in an EFL context that restricts opportunities for natural language acquisition, the classroom environment plays a key role. However, many years of unsatisfactory learning outcomes indicate that much needs to be done to overcome the limitations of the prevailing pedagogy and optimise learning conditions. It is well documented that project-based CALL has great potential to improve the language learning environment (cf. Debski 2000). This study addresses the questions of whether this approach also works in a tertiary setting in China, how the participants perceive the new learning environment and what kinds of support are required to make such an implementation successful.

Implementation

The purpose of this project is to create an optimal language learning environment. Since the Spring of 1997, fifteen English classes at Suzhou University, involving about 300 students, have been restructured to include negotiated student projects on the World Wide Web. Along with the implementation of these projects, new assessment criteria were established and new procedures and instruments were adopted. Among these were self- and group-assessment of participation, portfolios consisting of journals, Web pages, e-mail messages and peer reviews, and oral presentations of group projects. A Student Project Exhibition Center (http://call.suda.edu.cn/stuprojects/index.htm) was created and has since hosted about 80 multimedia presentations from participating students. Teachers on these courses also went through an on-going graduate course on CALL theories and practice, to equip them with the necessary theoretical basis and requisite skills needed for the implementation of the projects.
Evaluation

Data collection and analysis

To assess the impact of the CALL implementation on the classroom learning environment, a 35-item end-of-project survey (see Appendix) was conducted with all the participants for their perceptions of the new environment. This was based on the eight constructs of the optimal language learning environments proposed by Ebert and Hanson-Smith (1999), namely Interaction, Audience, Task, Sources, Help, Cognition, Atmosphere and Control. A statistical analysis was conducted to measure the degree to which the new CALL-enhanced environment satisfied the optimal language learning conditions. Students’ responses on a five-point Likert scale were calculated to obtain an overall mean score for all students, for all 35 questions. The mean score of each question was then compared to a hypothesised mean of 3 (representing a neutral score) using two-tailed t-tests. This procedure was to determine which questions generated positive or negative responses at a greater than chance level. The significance level was set at p < .05. Finally, the results of the questions were grouped under the eight constructs on the basis of which they were initially designed, and the overall mean of each construct was calculated.

In addition to the survey, qualitative data including classroom observations, student journals and teacher logs, semi-structured interviews and materials created by the students, were collected.

Findings and discussion

In all the classes, the survey results showed a positive response towards the CALL implementation, with most of the 35 items yielding a score significantly higher than the neutral score of 3. The Appendix presents the detailed results from one of the classes (Gu & Xu 1999), which include the mean scores of individual items in the survey, as well as the mean scores of relevant questions grouped under the eight constructs.

Based on the surveys and the qualitative data collected, five themes emerged as significantly impacting on the learning conditions of these English classrooms and the participants’ overall positive perceptions.

Authentic interaction with a variety of audience

This theme comes from the constructs of Interaction and Audience, which enjoyed a high mean in the surveys. Students also reported networking benefits in interviews and journals. Here is how one student put it,

As we were busy preparing our ‘Suzhou Glory’ Web page and introducing the garden city to our international partners from 22 countries, we had rich experiences of interacting with people from different cultures for different purposes such as explaining, requesting information and showing appreciation. This kind of opportunity is unimaginable in our traditional classroom.

Mutually designed tasks for more language input and output

This is related to the construct of Task and more specifically to Q4 (“the activities I do help me learn English effectively”) in the survey. The qualitative data also lend support to this theme. For example, the on-going project of English for Tourism involves the participants in building a city’s tourism resource page while attending the course. We found that the students negotiated with each other on project themes, searched the Web, consulted professionals and conducted interviews on
the scenic spots. They also did a considerable amount of extensive reading and creative writing. The end-of-project statistics show their average writing quantity was three times more than that of a peer class not on this project.

Improved feedback and cognition

This is related to the Help construct. Throughout the projects, students received feedback in various forms: written and verbal; formal and informal; group and individual. Networking helped them generate ideas and expanded the source of feedback from the teacher and classmates to overseas partners. The high-quality Web page publication for the China–Georgia Business Project by 20 non-English majors is a typical example. Participants expressed in their journals that they owed their ‘successful business’ to “the convenient way of sharing and group editing”, which helped them develop their thought and language.

Enhanced motivation and engaged learning

The motivating effect of the CALL environment was very prominent throughout the implementation. The instrumental benefits of learning computer skills and using e-mail were an important motivating factor. Furthermore, intrinsic motivation was kept high as students engaged in real communication. For instance, the enthusiasm and devotion of the Russian-English majors were clear as they discussed their theme-based group Web pages with their overseas partners online. To them, “Writing is no longer an assignment from the teacher but a way to express our ideas and exchange information”.

Collaborative atmosphere and learner autonomy

In the CALL classrooms, students were given a great deal of independence and responsibility for their own learning. They helped each other and worked together toward their common goals. For example, one group of Marketing majors decided to investigate the success of Kentucky Fried Chicken (KFC) in Suzhou. They searched the Internet, e-mailed American friends, and even conducted English surveys at a number of KFC stores in Suzhou. Their data-packed Web page shows their improved competence in both English and Marketing (Liu 2001). And, as one commented, “we’ve for the first time tasted sweet fruits of collaboration!”

Implications

Our implementation efforts were not uniformly successful, and the scarcity of classrooms with Internet access testifies to the challenges we face – individual, institutional and logistic – to make possible a large-scale implementation in a tertiary setting. Some major lessons and policy implications include:

- a schoolwide vision of student needs for new electronic literacies;
- adequate computer access and technical support;
- system support for curriculum and assessment reform;
- teacher training in CALL pedagogy and computer literacy; and
- a reward structure and academic recognition for all participants.

Note

1. All but one of the 15 classes were of English majors, among which three specialised in Foreign Trade, five in Tourism, five in Education and one in Russian and English.
References


**Appendix**

**Survey on student perceptions of the Network-supported learning environment**

**Table 1: Mean scores of student responses.**

(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree)

1. I have chances to use English for real communication. (4.364*)
2. I have chances to exchange ideas with other learners of English. (4.273*)
3. I have chances to discuss problems and difficulties with the teacher. (4.273*)
4. The activities I do help me learn English effectively. (4.455*)
5. I have great interest in taking part in the various problem-solving activities. (4.273*)
6. I have chances to read English written by real people that I communicate with. (4.000*)
7. I get to know a lot of interesting and new things through my key pals’ e-mail messages. (3.545)
8. I can have the teacher’s individual attention. (4.091*)
9. The teacher and my classmates are always available when I need help. (4.636*)
10. I have time and chances to reflect on my learning experience. (4.091*)
11. I pay attention when doing my work. (4.273*)
12. I know how well I’m doing. (3.636*)
13. The learning atmosphere is cooperative and supportive. (4.455*)
14. I feel comfortable working with my classmates and the teacher. (4.273*)
15. I’m given more responsibility for my own learning. (4.000*)
16. I decide my own pace of learning. (3.727*)
17. My opinions and suggestions are neglected. (4.091* when reverse coded)
18. I have chances to communicate with native English speakers. (3.455)
19. I have chances to share my feelings and thoughts with my classmates. (4.000*)
20. This project offers us a variety of activities that encourage me to use English meaningfully. (4.182*)
21. The ways we use English for different purposes while completing different tasks reflect our future needs. (4.182*)
22. I have chances to be exposed to the real language used in daily life. (4.091*)
23. The Internet provides us with a variety of authentic language learning materials. (4.000*)
24. I use English in many ways (e.g. to express my opinion, to look for relevant information, to discuss issues, etc.) (4.091*)
25. I can get immediate feedback from the teacher to my thoughts, ideas, and performance. (4.364*)
26. I have enough time to complete the tasks. (3.727*)
27. I think carefully about the things I do in the lab. (3.818*)
28. I get more involved in doing tasks in the lab than in a traditional classroom. (4.182*)
29. I feel I’m in an environment that encourages my free expression. (4.273*)
30. I feel I’m part of a community. (4.091*)
31. I’m afraid to make mistakes. (3.636 when reverse coded)
32. I can do what suits my own way of learning. (3.364)
33. I help to decide on topics for discussion and writing. (3.818*)
34. The project satisfies my needs to talk with others with a clear purpose. (4.273*)
35. I’m engaged in activities that encourage me to negotiate meaning with others in English. (4.091*)

Overall mean score for all 35 questions: 4.060
* Significantly better than a hypothetically neutral score of 3 at p<.05

**Table 2: Overall means of student responses by construct.**

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task</td>
<td>4.27</td>
<td>0.13</td>
</tr>
<tr>
<td>Interaction</td>
<td>4.24</td>
<td>0.14</td>
</tr>
<tr>
<td>Help</td>
<td>4.20</td>
<td>0.39</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>4.15</td>
<td>0.31</td>
</tr>
<tr>
<td>Audience</td>
<td>4.00</td>
<td>0.39</td>
</tr>
<tr>
<td>Cognition</td>
<td>4.00</td>
<td>0.27</td>
</tr>
<tr>
<td>Sources</td>
<td>3.95</td>
<td>0.23</td>
</tr>
<tr>
<td>Control</td>
<td>3.80</td>
<td>0.28</td>
</tr>
</tbody>
</table>