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## Abstract

English has become extremely important to Engineering students in this global corporate world. However, the curriculum offered for technical education in India are so comprehensive that the time allotted for English classes is usually Inadequate, implying that classes sometimes lack the breadth or reach to develop the English communication skills of the engineering students to the extent required for them to become as potential engineering professionals. This paper incorporates e-learning activities into engineering English classes created by CALL, a popular open source learning management program at Ramco institute of technology, Rajapalayam. The key objectives of incorporating these CALL-based practices are initially to introduce the idea of 'blended-learning' to the students, secondly to create a 'learning environment' where students will be able to work collaboratively on tasks both inside and outside scheduled class hours, and thirdly to provide more opportunities for learners to practice their English skills by providing them with on-going access to a range of useful learning resources through CALL. This paper outlines the design of instructional procedures and the integrated CALL based blended-learning environments for the student's English classes along with the assessment of e-learning platforms.

**Keywords:** CALL-Computer Assisted Language Learning, blended-learning, instructional procedures, e-learning platforms.

## 1. Introduction

In India, engineering professionals English has been increasingly pertinent. They are constantly in need of learning and in the use of English at conferences, seminars, workshops to discuss articles or to share ideas. Also, there are ever increasing opportunities to communicate among students and teaching staff in English. Unfortunately, because of the current comprehensive curriculum in India, English courses are only offered for the first and the second semester engineering program and with inadequate number of communication classes to train them in English for the remaining years. Such minimal exposure to English is insufficient to develop the English communication skills of the students and to make them corporate ready potential professionals.

As part of this reflection, a number of e-learning activates with CALL has been developed and implemented with an open source learning management framework. The key reasons for introducing such CALL-based practices in engineering English classes are to incorporate the idea of "blended-leaning" to students in order to make the class more effective for their English study. Secondly, to build a "learning environment" through which students may collaborate collaboratively on assignments both inside and outside regular college hours, and

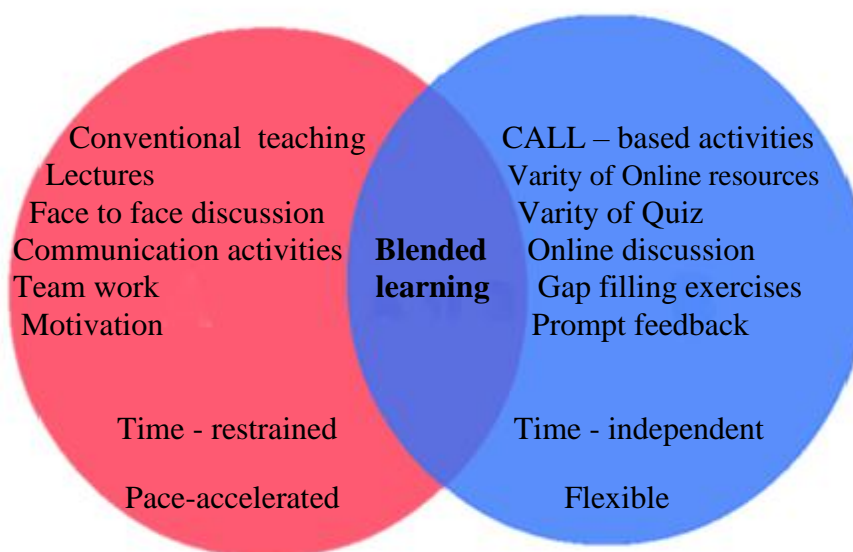
thirdly to further offer incentives for learners to develop their English skills through continuous exposure to a variety of practical learning tools through CALL.

## 2. Blended-learning Approach

### 2.1. Blended-learning

Blended learning entails incorporating elements of conventional traditional classroom teaching with computer mediated support. Blended strategies aim to ' balance ' time-constrained and place-dependent, synchronous activities with time-independent and flexible, asynchronous activities as seen in Figure 1. Teachers and students are expected to collaborate closely in a holistic approach to improving the consistency of teaching and learning. The method helps teachers to include a wide array of learning opportunities and automated tests to address a broad spectrum of learner expectations at all times. Such versatility in implementation is projected to result in better learning results for the students.

Figure 1: Blended-learning approach



### 2.2. A Blended-learning model for teaching Engineering English

A blended-learning model that consists of conventional instructions and structured e-learning activities has been designed. Table 1 shows a sample teaching procedure of Engineering English class for first-year students. In this example, traditional classroom teaching and Call-based activities account for 50% of the 60-minute-long class.

Table 1: Blended-learning model for engineering English class for first year students.

S.No	Practice	Time spent	CALL	Activities for students
1	Review of topic taught in the previous class.	5 min	✓	Answer questions in the form of blank, match and multiple choice questions.
2	Text based chalk and talk method of Teaching	30 min		Work on reading comprehension in following texts.
3	Conversation practice- Peer learning	10 min	✓	To work in teams and pairs in computers to discuss and answer questions online.
4	Assignment on the topic taught	15 min	✓	Work on further reading using online materials

### 3. Assessment and outcome of blended-learning classes

The effectiveness of the blended-learning model with the view of students is measured with the following:

- Blended-learning and its effectiveness for the study of English
- The relation of conventional instructions and CALL-based activities
- CALL functions in the improvement of English study

The results of the assessment and outcome for the first and second semester engineering English classes are illustrated in Tables 2, 3 and 4. The result obtained from Table-2 indicates the significant majority (75%) of the students felt that blended-learning model was useful for their engineering English study.

Table-2 Blended-learning approach

- Blended-learning and its effectiveness for the study of English

Practices	Number	Percentage
Very useful	32	32%
Useful	43	43%

Neither	10	10%
Not so useful	8	8%
Not useful at all	7	7%

Table 2: Result of practices with number of students involved (N=100)

Table-3 Indicates a significant majority of students (68%) thought that ratio was well-balanced with the need of convictional and CALL based activities, with 19% students wanting more LMS-based activities and 13 % wanting more convictional instruction.

- A well-balanced requirement with convictional and CALL based activities.

Activities	Number	Percentage
We want a lot more CALL activities	12	11%
We want a little more CALL activities	8	8%
Well-balanced	68	68%
We want a little more Convictional instruction	8	8%
We want a lot more Convictional instruction	4	5%

Table 3: Result of activities with number of students involved (N=100)

Table-4 Highlight that learners valued CALL quiz functions higher than any other function. This is illustrated by the top learning activities, ‘Dictation’, ‘Spelling’ and ‘Matching’, all based on the quiz function. Approximately one-third of the students found ‘Feedback’ from their teachers on their test results, ‘Resources/Links’, ‘Assignments’ and ‘forum’ which has also proved to be helpful for their study.

- CALL functions in the improvement of English study

Activities	Number	Percentage
Dictation	23	23%
Spelling (Vocabulary)	20	20%
Matching ( Vocabulary)	21	21%
Feedback from teachers	10	10%
Resources/Links	9	9%
Assignment	10	10%
Forum	7	7%

Table 3: Result of activities with number of students involved (N=100)

All the above findings suggest that learners mostly seem to think that the blended-learning model was successful, the blend of conventional teaching and CALL-based activities were acceptable, and CALL functions that offered programmed input, such as quizzes, helped them with their studies. However, establishing a "learning community," one of the main factors of this blended-learning strategy, has been effective as the students have assessed the feature ' Platform ' extremely well. Even though e-learning standards for students are high and their readiness to prepare for online discussions are extremely good.

#### 4. Conclusions

The early results from tests of the blended-learning methodology for the first and the second semester engineering English class at Ramco institute of technology, Rajapalayam show that students enjoyed the combination of conventional teaching and CALL-enhanced activities tailored for the curriculum. They consider the pattern to be helpful in enhancing their ability to learn English. This strategy, though, appeared to be effective in helping to build a learning community for the learners.

Finally, we have to be mindful that, there are limitations to this study as the sample is based within one institution, and of limited size, is a sample of convenience and thus not truly representative of all current students in English for all Engineering classes in India. However, applying a blended-learning model in classroom and with the implementation of steps for assessing blended learning strategies, CALL-based practices will be more importantly useful in refining the efficacy and outcome of the blended-learning model for engineering classes in English.

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