

# The Use of Computer Assisted Language Learning (CALL) to Improve Students' English Achievement Based on Modes of Teaching Delivery

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**Abstract:** The purpose of this study is to find out (i) whether the use of computer-assisted language learning (CALL) facilitates the students to have better achievement in English language learning at the English Department of UNM, and (ii) their preferences in terms of teaching delivery modes. The subjects of the study were the second semester students selected purposively. Two kinds of instruments were used, namely questionnaires and tests. The data were analyzed by using frequency and percentage distribution, mean analysis, t-test, and ANOVA. The findings of the study indicated that the use of computer to aid the EFL teaching contributed to the students' English achievement. In terms of teaching deliveries, most students preferred CALL-Classroom mode, which means that the students could much more benefit from the use of CALL programs in English learning.

**Keywords:** CALL, teaching delivery, language learning

Whatever the English colleges offer for their English programs, they should take account of the classroom in which it is the crucible where imperishable factors, teachers and learners, come together and language learning occurs. It is in the classroom where learning interactions happen. The classroom is the requisite factor of the English language teaching in Indonesia since it is the most potential setting for learners to find target language exposures and to practice their English. In other words, classroom interaction is the main concern in any language program, especially in English major EFL classes.

On the other hand, the time allotted for classroom sessions is very limited. Another problem is that the academic setting cannot always provide ample opportunity for students to practice the English language and sufficient target language exposure to acquire. If these two contexts, time and setting, are not well managed, the students cannot benefit much from the learning activities and will result in inadequate target language proficiency and fluency. To bridge the gaps, it is proposed that the teachers make the most of classroom sessions in order that students can be maximally exposed to language use of aca-

demic setting, which is one of the main concerns of this present study.

In addition, it is important that the institutions establish extra activities for students to practice the target language they are learning. In line with the advancement of information technology, computers can be made available to provide materials that can be used as an addition to face-to-face teaching and/or as a self-access learning resource. We all are amenable that computers can perform multimedia functions, which of course bring about innovative development in language education. Computer software in the forms of interactive CD programs is easy to find in the market. Some other kinds of software can also be installed in the hard drive of the computer. Spectacularly, Internet is even available that provides huge information and online learning programs which can cater teaching and learning needs for both teachers and students if especially used properly. Teachers who have sufficient computer literacy can be even more creative in authoring their own (online) learning programs. Therefore, it is very important to search for bright ways and faculty that can energize the SL/FL learning, which promote target language de-

velopment. This is a very momentous effort, since the teaching of English is often claimed to be unsatisfactory. On the other hand, the competence to communicate in English becomes a necessity and need for many people.

There are at least four determinant factors influencing the success of the FL learning, namely teacher, learner, material, and context. Ideally, the teacher should be competent enough in delivering his/her teaching. He/she should be able to offer and perform various modes of teaching delivery that can encourage students to practice and use the target language they are learning. In other words, the teachers should vary their teaching delivery so as to accommodate their student's different learning preferences.

The teaching material is another factor that should be planned to suit the students' condition. Some considerations that should be included in the material choice and development are the novelty, the level of difficulty, flexibility, efficiency, interactivity, repeatability, effectiveness, and teacher role. However, these considerations are often absent in the course planning. Many teachers teach their class using a textbook, following chapter by chapter. In other words, the material is treated as a master in the classroom. These considerations are also applicable to computer learning software in any forms and programs.

One of the advantages of computer use is that computer can interactively be used to aid EFL teaching. Some researches have proved the success of the use of computer in EFL teaching (Noni, 2002, Rasyid, Noni, & Baso, 2001; Shulman, 2001; Choi & Nesi, 1999; & Graus, 1999; & Rosetti, 1998). Computer is claimed to potentially influence the classroom atmosphere. It emerges as a prominent technology in promoting the development of education. In EFL teaching, it brings new perspective. However, in Indonesia, especially in South Sulawesi, it is realized that the use of the computer in formal educational institutions is mostly restricted to clerical work. Moreover, many teachers do not have sufficient computer literacy. Many also do not realize the potential the computer can have in second and foreign language classroom. As a result, the students are rarely/never exposed to computer-based English learning programs, which is usually called computer assisted language learning (CALL). In short, the CALL programs are still neglected in many EFL classroom settings in South Sulawesi, especially at the State Univer-

sity of Makassar.

At the English Department of the State University of Makassar, the current condition is again not promising enough for EFL teaching. The computer lab established in the department is merely used for computer skill practicum. The students are scheduled to use this computer facility in relation to the assignments of the computer courses they take. In other words, they are simply assigned to learn how to operate certain computer application programs. This should have actually been regretted since the computer lab consists of multimedia computers with good specification for CALL program. What's more, a number of English learning resources in the forms of interactive CDs have been made available. In relation to this research, three research questions are put forward, namely (i) does the use of computer-assisted language learning (CALL) to complement face-to-face teaching facilitate the students to have better achievement in English language learning? (ii) what delivery modes do the students prefer? and (iii) do the students who are different in their preference on delivery modes have different level of achievement?

This study applied two kinds of teaching deliveries, namely (i) language learning materials used on the CALL programs as an addition to face-to-face teaching with the material used in the classroom, and (ii) language learning materials are used on the CALL programs as an addition to face-to-face teaching with the material used in the students' own time. The first mode requires the teacher to incorporate his face-to-face teaching into the CALL programs. The first step for the teacher to do is identifying the topics or themes in the course syllabus. He then looks through CALL programs and materials, which are available and, if possible, browse and download relevant resources. Of course, this needs time and commitment to prepare. If those resources and materials are already at hand, the teacher has to make his instructional design. The use of computer may either precede or follow the face-to-face teaching. If it comes first, it may function as a warming up or a starting point for further classroom activities, such as group discussion, pair work, and individual work. On the other hand, if it follows the classroom activities, it may function as a confirmation or follow-up activities.

The second mode also requires the teacher to integrate the existing course syllabus with the

available CALL programs and materials. However, they are used without the presence of the teacher. Teacher roles to directly control and guide the students on the spot when they are doing their CALL activities are absent. This is not without advantage. The students sometimes gain their self-confidence to use the target language when they feel not being watched by their teacher.

The current computer specification which is more sophisticated enables the computer itself to perform various multimedia tasks, either delivered with CD-ROM, authoring packages, or Internet. Some examples are Longman Interactive English Dictionary (CD-I), Compton's Interactive Encyclopedia (CD-I), Learn to Speak English (CD-I), Hot Potatoes (authoring tool), WIDA Software (authoring tool), Storyboard, English Practice ([www.englishpractice.com](http://www.englishpractice.com)) (online).

In terms of computer-based materials, the researcher used self-adapted materials using Hot Potatoes (HotPot) authoring package, materials downloaded from internet in the forms of Storyboard, ready use material, and interactive mode-based materials, and CD-ROM based materials. The Hot Potatoes is a set of six authoring tools, created by the Research and Development team at the University of Victoria Humanities Computing and Media Centre. They can be used to create interactive Web-based exercises of six basic types. The exercises use JavaScript for interactivity. Although the exercises are constructed using JavaScript, we don't need to know anything about JavaScript to use the programs. All we need to do is to enter data, such as texts, questions, answers, and the programs will create the Web pages. Of the six types, the researcher used four of them, namely JBC used to make multiple-choice quiz, JCloze used to make gap-fill exercises, JCross used to make crosswords, and JMatch used to make matching exercises.

The researcher also used some learning materials downloaded from the Internet, namely storyboard, ready use materials, and interactive materials. The storyboard was downloaded and copied in every set of computer. The students then were asked to fill out the storyboard displayed in each of their computer screen according to the instruction provided. The ready use materials consist of exercises for students to work with. The students may do the exercises in the computer using another application program or on a piece of paper, depending on the preferred

mode. The materials were mainly downloaded from the website: <http://iteslj.org/links>. The interactive mode-based materials were the online or offline materials used by students to do exercises. These were very encouraging since they offer real use of the target language. CD-ROM was another type used in the English learning process. There have been so many kinds of CD-ROM learning materials produced and available in the market. Therefore, the teacher should be capable enough in appropriately incorporating the available materials into their teaching.

## METHOD

This study is classroom-based in which it deals with some classroom variables. This design involves one group which is pretested ( $O_1$ ), exposed to a treatment ( $X$ ), and post-tested ( $O_2$ ). The pretest was given before the students receive treatment, while the post-test was given after the students receive the treatment. The treatment was carried out in the form of a pilot study on the use of CALL to complement face-to-face teaching. The dependent variable of this study is the students' achievement and the independent variable is the modes of teaching delivery.

The research subjects are the English major students of State University of Makassar of the second semester. The number of population was 286. They were from three study programs, namely English Education (117 students), English Literature (53 students) and Business English (116 students). The sample was the second semester students of Class A of Business English Study Program which consisted of 35 students. They were selected purposively.

This study employed two different instruments based on the variables investigated, i.e. questionnaire of teaching delivery modes and achievement test.

The treatment was delivered along the semester with fourteen meetings of two teaching hours each. The procedure consisted of planning, teaching-learning process, and evaluation.

The data obtained from the test was scored in two ways. The paper-based test was scored manually, while the computer-based test was automatically scored in the form of instant feedback. The two sets of scores were then added up and divided by two (2) to determine the students' final score.

The data analyses applied in this study were frequency and percentage distribution for modes of

delivery and mean analysis was for scores obtained from the test. The analysis used to find out the difference between the two groups of delivery modes was independent samples t-test.

## RESULTS AND DISCUSSION

This section deals with the presentation of the data gathered from the research instruments. The data include the students' preference on the modes of delivery with CALL and the students' achievement.

### The Students' Achievement

The result shows that the mean score of the students' posttest is 79.2, which is categorized as good. This posttest mean score is higher than the pretest, namely 49.37. The mean difference is 29.83.

The difference of the two mean scores was tested at the .05 level of significance using One-Sample T-test statistical procedure. It was intended to find out whether or not the students' mean scores of pretest and posttest are identical. The result shows that the probability value is .000, which is smaller than 0.05 ( $p < .05$ ). This means that the mean scores of the students in their pretest and posttest are not identical. In other words, there is a significant difference between the students' mean score before and after receiving treatments. This implies that the implementation of CALL programs could complement face-to-face teaching could significantly contribute to the improvement of the students' English language learning achievement.

Some evidences can be indicated to support the findings on the achievement. It should be explained that the course materials, in terms of the topic of discussion, had never been taught to the sample. Moreover, the test contents were also taken from the taught materials. Therefore, that the implementation of CALL program could improve the students' achievement in EFL course can be reckoned to be a true inference. The achievement meant in this study was the learning attainment covering the integrated language skills and language elements (vocabulary and structure) since the teachings were in integrated language skill deliveries.

It is necessary to further elaborate that the approach underlying the use of computer in EFL teaching implemented in this study was integrative CALL,

which emphasizes real language use in a meaningful, authentic context. It seeks both to integrate the various skills of language learning and to integrate technology more fully into language teaching (Lee, 2000). Therefore, it offers new opportunities for better language practice and creative language learning. This has been proved by some researchers (Choi and Nesi, 1999; Feliz, 2001; Graus, 1999; and Stepp-Greany, 2002).

However, it cannot be confidently assumed that the improvement is entirely due to the treatments since the present study used one-group pretest-posttest design. It is realized that this design is weak to be the basis of inference. Gay (1996) states that something may happen to the subjects or inside of the subjects to make them perform better the second time. It cannot be denied that some factors could also contribute to the achievement, such as other majoring courses taken by the students at the same term and that the students might learn something on the pretest that helped them on the posttest. If it is true, it should be understood that these are not the main factors to influence the intended achievement.

Referring to the result of the present study, it seems that the positive impact of the above mentioned integrative CALL is true. This implies that the implementation of CALL programs could enhance the creative learning opportunities in the EFL classroom. It is also important to assert that the CALL activities exposed authentic uses of the target language, so that the students could acquire meaningful expressions. To mention one of the examples, the students were exposed to an activity where some of them were assigned to take role as a receptionist of hotel and the others as a hotel guest. The receptionist was to administer the booking by filling out the form in the computer based on the guest's details and the room to be reserved. The students did their conversation as if they were in the hotel reception desk. Though, the setting was artificial, the students were still exposed to the authentic language use displayed through the monitor of computer in the forms of hotel room status and information and reservation form. Based on the researcher's observation, the students could remarkably perform the given activities. Therefore, the students got an auspicious learning experience, which provided them opportunity to acquire the expressions they were learning from materials exposed in the computer and the ones they converse about in the given setting.

## The Students' Preference on the Modes of Delivery

The result of analysis shows that the students mostly preferred the language learning materials used on the CALL programs as an addition to face-to-face teaching with the material used in the classroom (CALL-Classroom) (88.57%) to that with the material used in the students' own time (CALL-Own-Time) (11.43%). This indicates that the presence of the lecturer in the CALL environment is necessary to facilitate and control the students in doing their CALL activities.

To see the difference between the two groups in their achievement, the analysis used was t-test statistical procedure at the .05 level of significance. The result reveals that the probability value is smaller than .05 ( $p < .05$ ). This indicates that the mean scores between the students who prefer the CALL-Classroom delivery mode and those who prefer the CALL-OwnTime delivery mode are significantly different pertinent to their learning achievement. It can be concluded that the students with CALL-classroom mode gained better achievement ( $\bar{X} = 80.55$ ) than those with CALL-OwnTime ( $\bar{X} = 68.75$ ).

As portrayed in the previous part, the teaching deliveries investigated in this study are of two modes, namely the language learning materials used on the CALL programs as an addition to face-to-face teaching with the material used in the classroom (CALL-Classroom) and the language learning materials used on the CALL programs as an addition to face-to-face teaching with the material used in the students' own time (CALL-OwnTime). The data show that most students (88.57%) preferred the one with the material used in the classroom, while the rest (11.43%) preferred the one with the material used in the students' own time. This result appears to corroborate another study (Felix, 2001) which investigated the Web as a language learning tool. The result showed that more than half of the respondents (55.4%) considered that the best way to use Web materials was in class as an addition to face-to-face teaching. These results should be read in the context that the CALL activities are more favorably implemented to aid the EFL teaching in the classroom. This also indicates that the presence of the teacher/lecturer is badly needed to facilitate the learning, which means that computer should not substitute teachers. For sure, 75% of the students opted agree

and strongly agree for the item of the questionnaire which pinpoints that the presence of the instructor during the CALL activities increased the learning potential in the class. This finding is in line with what Jones (2001) states, that is "CALL teachers regard the computer as requiring guiding hand of a human being; as more of an invaluable resource than an independent tutor (Jones, 2001). Therefore, it is necessary that the teacher have commitment in properly designing CALL activities to aid his/her teaching if facilities and equipment are at hand.

In respect to the students' achievement, the finding shows that the students who prefer CALL-Classroom differ from those who prefer Call-Own-Time in terms of their average scores they got. This is proven by the hypothesis testing which shows that  $H_1$  is accepted ( $p < .05$ ). Since the average score for students who prefer CALL-Classroom was higher, it can be inferred that the students with CALL-Classroom delivery mode could much more benefit from the hybrid of face-to-face teaching and CALL. These results indicate that CALL programs are very heartening and worthwhile to complement the face-to-face teaching. In other words, the teachers or lecturers of English as a foreign language should reckon the CALL programs as one of the potential teaching aids to facilitate their face-to-face teaching.

## CONCLUSIONS

This study found that the use of computer to aid the EFL teaching contributed to the students' English achievement. Two main reasons that could make this happen, namely the interactivity of the CALL programs and that the use of computer in EFL learning was new to them. Therefore, it is undoubted that the decision to apply CALL in EFL teaching is a progressive step. This also confirms why the use of CALL programs is important to complement the face-to-face teaching in EFL classroom.

In terms of teaching deliveries, most students preferred the language learning materials used on the CALL programs as an addition to face-to-face teaching with the material used in the classroom (CALL-Classroom) compared to the one with the material used in the students' own time (CALL-Owntime). This finding should be read in the context that the CALL activities are more favorably implemented to aid the EFL teaching in the classroom. This implies that the presence of the teacher/lecturer

is needed to facilitate the learning, which means that computer should not substitute teachers. In respect to achievement, students with CALL-Classroom delivery mode much more benefited from the hybrid of face-to-face teaching and CALL.

Based on the above conclusions, it is important to note that when computer facilities are available in a unit of education, it is very unfortunate if CALL environment is not set up. This present study and others have proved that CALL offers new opportunities for better language practice, especially in the latter phase of computer use in EFL teaching.

## Recommendations

To be idealistic, it is expected that the students get very good results in their achievement. However, the treatments delivered in this study could only bring the students to reach the good category. Therefore, some more efforts, such as enriching various kinds of CALL materials need to be undertaken in order that the students get more opportunities to practice and use the target language.

The English Department as one of the units at UNM responsible for the improvement of EFL teaching should be a reference for the implementation of CALL in enhancing the students' opportunities to practice and use English as a foreign language. Therefore, all staff at the unit should have commitment to make this happen.

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