THE EFFECTIVENESS OF CALLA MODELS ON IMPROVING ENGINEERING STUDENTS' COMMUNICATIVE COMPETENCE.

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Abstract

This research was intended to meet the objective of the study: to examine the effectiveness of CALLA Models in improving students' communicative competence. This study revealed several important findings. Firstly, group of students who receive CALLA Model is more effective in improving students' communicative competence compared to control group who do not receive Strategies-Based Instruction. The statistical computation also shows that there was enough evidence to reject the null hypothesis. Based on the result of this study, there were some suggestions made by the writer which are addressed to English teacher, students and future researchers. It is hoped that English teachers could not only know how to teach the language, but also know how to develop students' learning strategies. Thus, learners are demanded to learn and use more learning strategies. The students may try or use any learning strategies which enable them to be better in speaking English. For the researchers, it is suggested to take the findings as well as the limitation of the present study for different level of students. Similar research could also be conducted in different field, such as science.

Key Words: CALLA Models, Communicative Competence

Abstrak

Penelitian ini bertujuan untuk mengetahui efektivitas Model Calla dalam meningkatkan kompetensi komunikatif siswa. Penelitian ini mengungkapkan beberapa temuan penting. Pertama, sekelompok mahasiswa yang menerima Model Calla lebih efektif dalam meningkatkan kompetensi komunikatif siswa dibandingkan dengan kelompok kontrol yang tidak menerima *Strategies-Based Instruction*. Perhitungan statistik juga menunjukkan bahwa ada cukup bukti untuk menolak hipotesis nol. Berdasarkan hasil penelitian, ada beberapa saran yang ditujukan kepada guru bahasa Inggris, mahasiswa dan peneliti masa depan. Diharapkan bahwa guru bahasa Inggris tidak hanya tahu bagaimana mengajarkan bahasa, tetapi juga tahu bagaimana mengembangkan strategi belajar siswa. Dengan demikian, peserta didik dituntut untuk belajar dan menggunakan strategi belajar yang lebih baik. Para siswa dapat mencoba atau menggunakan strategi pembelajaran yang memungkinkan mereka menjadi lebih baik dalam berbicara bahasa Inggris.

Kata Kunci: *CALLA Models, Communicative Competence*

A. INTRODUCTION

Speaking is one of language skills that should be mastered in learning English. This skill is the most significant indicator for students' success in learning a language. By mastering speaking skill, students can communicate their ideas in school and especially when they have worked.

Moreover learning how to speak English fluently and accurately is always a grand task for students who graduate from a university. The university outcomes are demanded to have speaking competence to compete in finding a good job. They have to be able to talk their ideas and clarify their thinking in spoken form. Considering the demands of communicative competence, English teachers need to pay more attention to the development of learners' communicative competence and focus on a more effective and successful method.

Considering the quality policy of *Politeknik Perkapalan Negeri Surabaya (PPNS)* in performing a qualified vocational education to produce high competitive graduations (http://www.ppns.ac.id/index.php/tentang-ppns/kebijakan-mutu.html), the *PPNS* graduations are expected to master not only technical skills but also soft skill that is their communicative competence that can support their competencies in facing working world.

As a vocational education institution, *Politeknik Perkapalan Negeri Surabaya (PPNS) ITS*, has strict learning schedule. Talking about English, it is only a minor subject in this institution. In fact, the English Subject is only learned in a very limited time by PPNS students. Students only learn English once a week in two hours. Surely, it is not enough compared with the competency should be mastered by the students. Therefore, it can be concluded that the limited time is one of the problem faced in learning English.

Another problem found in English learning is *PPNS* students' low motivation in learning English. It is mainly caused by the position of English as a minor subject. Students are already burdened by so many assignments from engineering subjects that are considered more important than English subject. Therefore, English are sometimes neglected and considered not very important.

Generally, students don't have intention to add their knowledge by following any English course outside the classroom. It means that students only learn English in classroom. Thus, it can be assumed that the very limited time in classroom with their teacher become a very valuable moment in their English learning. So, the role of teacher in using their valuable time is very important. Teachers should be able to use the very limited time to be a meaningful learning that can increase the student's competence.

Moreover, students learn English without using any learning strategy. In fact, they are not aware that they have to use specific learning strategy match with their learning style to be successful in learning a language. They only learn English by doing any assignment given by the teachers. Therefore teachers should make the students aware their specific language learning strategies and urge them to use those strategies in optimizing their competence. Thus the writer believes that by developing students' use of their learning strategies can improve their communicative competence.

Because of those conditions and factors, in this study the researcher designs the English learning in classroom based on student's language learning strategies by adopting the five phases of the CALLA (Cognitive Academic Language Learning Approach) instructional sequence (Chamot & O'Malley, 1994; Chamot *et al*., 1999, as cited in Chamot, 1999).

The writer believes that **CALLA Models** can help students "learn better" by raising students' awareness of language learning strategies, by highlighting the relationship between strategy use and language learning tasks, and by increasing students' existing language learning strategies. By implementing Strategies-Based Instruction in classroom, the students' learning strategies can be improved.

Therefore, this study aims to point out the efficiency of language learning strategies on students' communicative competence. This study also illustrates a useful way for language learners and teachers to know how to make good use of language learning strategies in promoting communicative competence.

Moreover, this study also gives a clear method in implementing CALLA (Cognitive Academic Language Learning Approach) model in language learning process. This implementation could be seen in the lesson plan organized by the teachers. Thus, it is very useful for the students to improve their communicative competence with more effective and efficient ways by using their specific language learning strategies.

Based on the background above, the researcher formulates the following questions:

1. Does the use of CALLA models in language learning process improve the students' communicative competence?
2. How is the effectiveness of CALLA models in improving students' communicative competence?

In accordance with the problem stated above, this study is designed to examine the effectiveness of CALLA models in improving students' communicative competence. It is hoped that by the use of CALLA model in implementing language learning strategies employed by the students to the learning process in classroom, the students' communicative competence can be improved. Thus, the way this method is organized in classroom learning would give benefit to other teachers in collaborating the students' learning strategies.

The writer adopts CALLA model in developing Strategies-Based Instruction to implement the students' learning strategies in the learning process. The Cognitive Academic Language Learning Approach (CALLA) is an instructional model for second and foreign language learners based on cognitive theory and research. The Cognitive Academic Language Learning Approach (CALLA) is investigated by Chamot and O'Malley. It is designed to develop the academic language skills of the students with limited English proficiency. CALLA integrates instruction in priority topics from the content curriculum, development of the language skills needed for learning in school, and explicit instruction in using learning strategies for academic tasks. (Chamot, 2005)

The CALLA (Chamot, 2005; Chamot *et al*., 1999) model is composed of five steps, namely:

1) Preparation.

In this stage, the teacher identifies students' current learning strategies for familiar tasks, such as recalling their prior knowledge, previewing the key vocabulary and concepts to be introduced to the lesson;

2) Presentation.

In this stage, the teacher models, names, explains new strategy; asks students if and how they have used it, such as selective attention, self-monitoring, inference, elaboration, imagery and note-taking strategies;

3) Practice.

In this stage, the students practice new strategy; in subsequent strategy practice, the teacher fades reminders to encourage independent strategy use by being asked to check their language production, plan to develop an oral or written report or classify concepts;

4) Evaluation.

In this phase, the students evaluate their own strategy use immediately after practice, determining the effectiveness of their own learning by summarizing or giving a self-talk, either cooperatively or individually;

5) Expansion activities.

In this phase, the students transfer the strategies to new tasks, combine strategies into clusters, develop repertoire of preferred strategies and integrate them into their existing knowledge frameworks.

B. METHODS

The design of the study is using quantitative research methods. This study is to accomplish the task by performing an experimental research design. The variables are manipulated and their effects upon other variables are observed. It refers to the cause of implementing CALLA Model that is hoped has a positive and significant effect in increasing student's communicative competence. Therefore, this study will be best conducted in an experimental research design, because it is the only truly reliable method of establishing cause and effect.

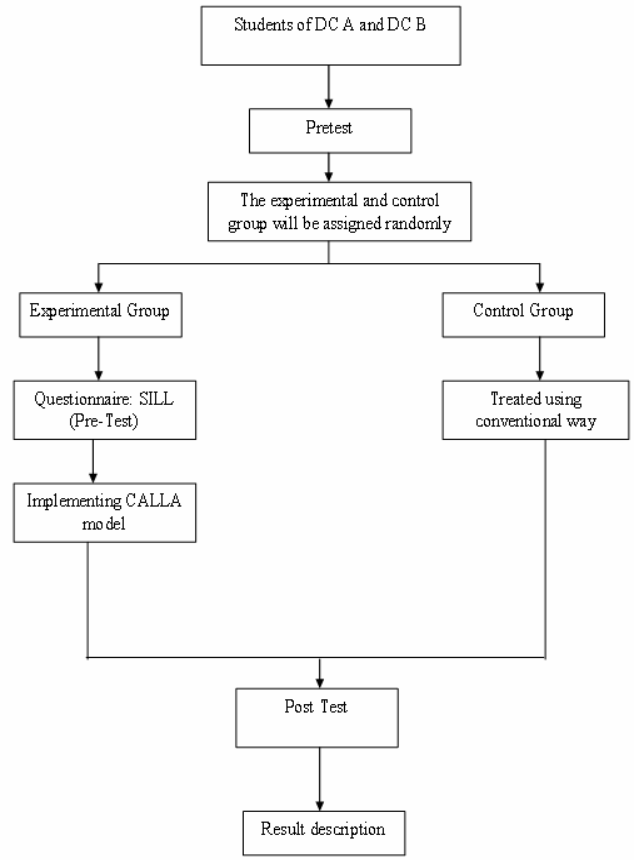
In this study, the experimental group is a group of students, which is treated by implementing CALLA (Cognitive Academic Language Learning Approach) model in increasing student's communicative competence. The control group is a group of students which is treated using the 'conventional' ways in learning process. The 'conventional' ways of teaching means the common teaching and learning process without implementing CALLA (Cognitive Academic Language Learning Approach) model. This control group serves as the baseline against which the effect of the manipulated condition can be compared.

Thus speaking test is also needed to know the effectiveness of strategy-based instruction in improving students' communicative competence. The tests consist of pre-test and post-test. These tests are recorded to get the data.

The population of this study is the students of non-English Department, *Politeknik Perkapalan Negeri Surabaya ITS*. The researcher took two classes as the subject of the study, they were DC A and DC B of Design Construction Department. Those classes were chosen because both of the classes have the same entry behavior levels. It is proven by the homogeneity tests from the pre speaking tests. So it is possible to choose one of them as an experimental group and a control group randomly.

The subjects of this study are 58 students, 29 students are from DC A class and the other 29 students are from DC B class. Both of these classes, experimental and control group are not taught by the researcher but by another

teacher who has been trained by the researcher how to teach learning strategies. The teacher has received practical training in techniques to raise awareness of individual differences and learning strategies preferences, introduce systematic strategy use in the classroom, integrate strategies-based activities into daily lesson plans, and facilitate discussions of strategy effectiveness. Thus, the teacher teaches both classes with different treatments.



C. FINDINGS

During the implementation of Strategies-Based Instruction in experimental class, the researcher was observing the teaching learning process. Thus, the observation shows that the learning process was running well. There are some phases that were observed in teaching process; Preparation, Presentation, Practice, Evaluation and Expansion. In Preparation phase, the teacher has already asked students to describe the strategies they already use and included activities such as discussions to help students become aware of their strategies. By doing these preparations, students are more ready in learning new strategies.

In Presentation phase, the teacher has already selected strategies to teach that are appropriate for the task and explained it. But the teacher rarely tell students why and when to use the strategy. She only models how to use the strategy with the same kind of task.

In Practice phase, the teacher has already chosen challenging tasks for students and provided activities for students to practice the strategies. She keeps reminding the students to use the strategy or strategies that have been taught.

In Evaluation phase, students have been encouraged to evaluate their own use of strategies by discussing with students which strategies they find most useful for the tasks they have just completed.

In Expansion phase, it seems that the teacher rarely suggested to students how they can use the strategies in other subjects and in daily life. It seems that the teacher only concerned with the subject taught.

Based on the observation, it can be said that the teacher has done five phases of CALLA models well. Moreover, the observation also shows the implementation of CALLA Models in classroom is effective.

To examine more about the effectiveness of CALLA Models in improving students' communicative competence, the writer analyzes the students' scores of pre-post speaking

tests. As mentioned above, the writer held this research by teaching learning process that has been done at two classes that are DC II B as control class and DC II A as experiment class. And the writer got the data from pre-test and post test. The pre-test was given before the lesson began and the post-test was given after the lesson finished.

In experimental group, the result of pre-test is gained with range score between 30 and 50 and the mean score is 39.6. Meanwhile in the post-test, the range score is between 32 and 55 and the mean score is 45.6.

Appendix7. Pre-Post Speaking Tests of Experimental Class

No	Student	PreTest	Post Test	Gained
1	Student#1	35	41.4	6.4
2	Student#2	50	52	2
3	Student#3	40	43	3
4	Student#4	55	55	0
5	Student#5	35	41.2	6.2
6	Student#6	30	41	11
7	Student#7	35	45	10
8	Student#8	50	45.2	-4.8
9	Student#9	30	43	13
10	Student#10	45	48.2	3.2
11	Student#11	45	48.2	3.2
12	Student#12	40	43	3
13	Student#13	43	46	3
14	Student#14	40	47	7
15	Student#15	40	46	6
16	Student#16	30	38	8
17	Student#17	52	54	2
18	Student#18	50	52	2
19	Student#19	38	40.4	2.4
20	Student#20	40	50	10
21	Student#21	45	49	4
22	Student#22	35	44	9
23	Student#23	40	49	9
24	Student#24	35	48	13
25	Student#25	35	45.6	10.6
26	Student#26	35	46	11
27	Student#27	35	42	7
28	Student#28	30	33.2	3.2
29	Student#29	35	44.6	9.6

The data calculation and raw scores of the pre-pos tests of experimental class can be described as follows:

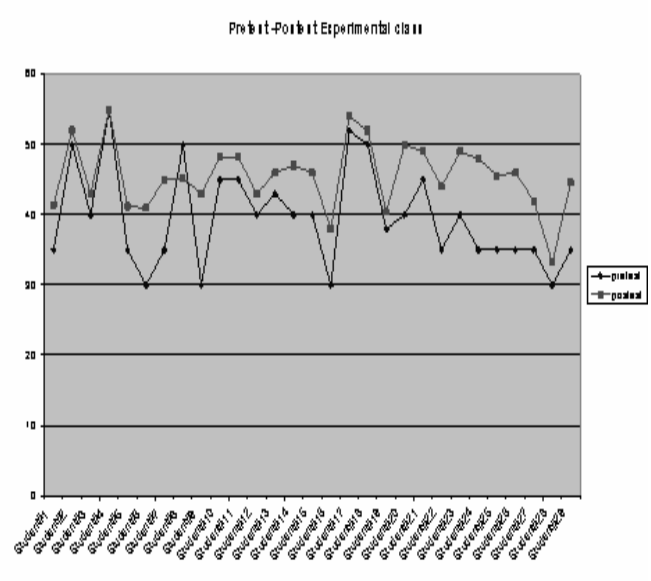


Figure 1 Diagram of Students' pretest-posttest results from experimental group

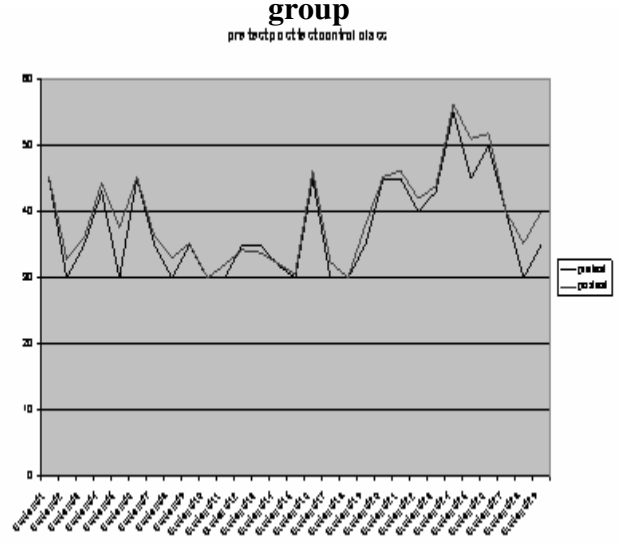
The result of pre-test in control class is gained with range score between 30 and 55 and the mean score is 37.5.

Appendix 8. Pre-Post Speaking Tests of Control Class

No	Student	Pre Test	Post Test	Gained
1	Student#1	45	45.2	0.2
2	Student#2	30	32.8	2.8
3	Student#3	35	36	1
4	Student#4	43	44.4	1.4
5	Student#5	30	37.6	7.6
6	Student#6	45	45.2	0.2
7	Student#7	35	36.2	1.2
8	Student#8	30	33	3
9	Student#9	35	35.2	0.2
10	Student#10	30	30	0
11	Student#11	30	32	2
12	Student#12	35	34.2	-0.8
13	Student#13	35	33.8	-1.2
14	Student#14	32	32.2	0.2
15	Student#15	30	30.6	0.6
16	Student#16	45	46.2	1.2
17	Student#17	30	32.4	2.4
18	Student#18	30	30	0
19	Student#19	35	38	3
20	Student#20	45	45.2	0.2
21	Student#21	45	46.2	1.2
22	Student#22	40	42	2
23	Student#23	43	43.8	0.8
24	Student#24	55	56.2	1.2
25	Student#25	45	51	6
26	Student#26	50	51.8	1.8
27	Student#27	40	40	0
28	Student#28	30	35.2	5.2
29	Student#29	35	40	5

Meanwhile, the result of post-test is gained with range score between 30 and 56.2 and the mean score is 39.2. Based on the pre-post tests scores finding of control classes, it can be described as follows:

Figure 2 Diagram of Students' pretest-posttest results from control group



From the diagrams above, it can be seen that generally there are some improvements from the students' communicative competence in both

groups. It is clearly presented by the movement of the red curves (posttest) if it is compared to the blue curves (pretest). Based on the diagram, some improvements are gained by experimental group and control groups. However, the improvements in experimental groups are bigger than the improvements in control group.

Based on the result of students' pre test and post test scores from both experimental and control class, the descriptive analysis was continued to the computation done through SPSS. Thus, the description of the pretest's result from both groups can be seen below:

Table 1 Group statistic

	groups	N	Mean	Std. Deviation	Std. Error Mean
pre test scores	experimental	29	39.5862	7.01283	1.30225
	control	29	37.5172	7.20427	1.33780

The group statistics table shows that there are twenty nine (29) students for each group. Thus, the mean of experimental and the control method group are 39.5, and 37.5. The standard deviation CALLA group and the Conventional group are 7.01 and 7.20.

Before calculating the t-test, firstly the researcher tested the data normality and the data homogeneity. In experimental research, the data normality and data homogeneity are very important steps to be done before the testing of the hypothesis is processed. The Kolgomorov-Sminorv analysis is used to determine the normality of the data. Thus, the normality test is done on speaking products from the control and experiment class.

Table 2 Test of Normality (One-Sample Kolmogorov-Sminorv Test)

		pre test for experimental group	post test for experimnetal group	pre test for control group	post test for control group
N		29	29	29	29
Normal Parameters [a,b]	Mean	39.5862	46.5517	37.5172	39.1862
	Std. Deviation	7.01283	4.77722	7.20427	7.14501
Most Extreme Differences	Absolute	.192	.083	.223	.146
	Positive	.192	.083	.223	.146
	Negative	-.119	-.071	-.148	-.099
Kolmogorov-Smirnov Z		1.032	.449	1.200	.780
Asymp. Sig. (2-tailed)		.237	.988	.112	.578

a. Test distribution is Normal.

b. Calculated from data.

The table shows that the value of Asymp.Sig. (2-tailed) is bigger than 0.05, therefore it can be said that the data distribution is normal (Ghozali, 2007).

Next, the data is also calculated using Lavene test to know the homogeneity of the data. The result of the Lavene test can be seen in detail in this following table.

Table 3 The result of Normality and Homogeneity Tests

Source of Variance	Result of Lavene Test	Significance (p-level)	Result of Variance
Speaking competence	0.453	0.504	Not difference of variance (homogeneous variance)

Table 4.3 shows that F-Levene test of speaking ability is 0.453 with the probability of 0.504. Since the p-level value is bigger than 0.05, it can be concluded that the data is homogeny meaning that the variance between the control class and the experimental class for speaking competence is not different (homogeny). In other word it can be said that this data is equal variances assumed.

The results of the homogeneity and normality test above can be used as the reason to use T-test in testing hypothesis in order to know the difference of the speaking achievement between the control class and experiment class).

After the normality and homogeneity of the data are proven, the statistical analysis can be done to test the hypothesis. The data of test hypothesis can be seen in Table 4.4

Table 4.4 T-test between Experimental and control groups' post tests

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
post test scores	Equal variances assumed	7.627	.008	3.988	56	.000	6.36652	1.59604	3.16826	9.56477
	Equal variances not assumed			3.988	48.865	.000	6.36652	1.59604	3.15793	9.57511

The T-test results show that the value of t is 3.3988 with sig 0.000 which is smaller than 0.05. Therefore it can be said that there is significant difference between the posttest of experimental and control test.

Based on the statistical analysis, it is also found that the t-test value is 3.3988. And the degree of freedom (df) is 56. since there is no degree of freedom from 56, so the writer uses the closer df and it is 60. Based on the table the value of t-table from 60 is 2.00.

Then the writer compared the value of t-test and the t-table that if the value of t-test > t table it means that H0 is rejected and H1 is accepted, but when the value of t-test < t-table it means that Ho is accepted and H1 is rejected.

Since the t-test value is 3.3988 and it is bigger than 2.00, it can be concluded that the value of t-test > t-table. Based on the result, Ho is rejected because t-test > t-table. It means that there is influence or significant. Or it can be said that there is a significant influence of using CALLA Models in teaching speaking.

It can be concluded that teaching speaking through CALLA Models is quite success. Moreover, it can also be seen on the table of the students' speaking scores that the students who learn speaking through CALLA Models and Conventional Method have a significant difference. It means that there is a significant influence of using CALLA Models in teaching speaking.

Therefore, the conclusion is that the students' speaking scores taught by CALLA Models are better than taught by Conventional Method. In other words, the use of CALLA Models in teaching speaking has a significant difference to the students' achievement in speaking skill at *PPNS* students.

D. CONCLUSIONS AND SUGGESTIONS

Based on the research findings of the present study, the writer concludes that the group of students who receive CALLA Models is more effective in improving students' communicative competence compared to control group who do not receive Strategies-Based Instruction. The statistical computation also shows that there are enough evidences to reject the null hypothesis.

Thus learners are suggested to learn and use more learning strategies. The students may try or use any learning strategies which enable them to be better in speaking English. Teachers are demanded to know not only know how to teach the language, but also know how to develop students' learning

strategies. In other words, they have to implement CALLA Models in class.

Although the findings of this study have convincingly proven that CALLA Models can improve students' communicative competence, other future researchers, replication of such studies in other regions all over Indonesia are still needed.This experimental study is conducted for University students. It is not yet known whether an experiment conducted in lower levels also yields the same results. For other levels, Senior High, Junior High and Elementary schools need to be proven.

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