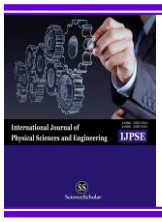

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# Strategy of Improving Student Achievement in English Learning through Concentration Approach

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*Speed;*
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**Abstract**

This research is a research about the effect of student mobility in the class on the concentration of learning and its influence on learning achievement. Mobility in the classroom is done through simple interactive learning, which is an effort to invite students to always move and always active in the learning process. Departing from the problem that the concentration of students decreased in line with the length of the lecture and the lack of interaction of students in the class, then made a strategy that allows the concentration of students to stay awake during the lecture process is by improving the mobility of students in the classroom. In order to know the effect of treatment/intervention on the subject condition, there will be a real experimental study using two crossover design. Assessment of quality of learning process done by research 2 cycle, wherein each cycle ended with giving test/questionnaire. The results showed that the concentration indicator consisting of speed, accuracy, and constancy increased significantly after the students improved their mobility in the classroom. Increased concentrations also have a significant impact on student achievement.



**Contents**



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## 1. Introduction

Concentration in the learning process is an important aspect. Without a good concentration of learning, absorption will certainly be low. In English learning, this is also true, even with a higher degree of urgency. It is difficult to imagine if students who receive "conversation" materials can perform tasks imposed by lecturers if students are not serious or lack concentration. Concentration is also required when carrying out the technicalities of the learning stages. Gaurav [1] and Milos [2] states that in understanding the course material, students are faced with several technical problems, namely the weakness of the quality of the learning process, which includes: 1. The utilization of facilities or learning media; 2. Steps of learning; 3. Student interaction; 4. Utilization of study time; 5. Utilization of learning potential; 6. Utilization of material/teaching materials and 7. Relevance context syllabus content with the field of work. Factors above have a very close relationship with the absorption and mastery of learning and implicate the level of achievement of learning that can be achieved by students [3]-[4]. Still related to the above, the student's response to the ability of lecturers in providing course materials is also very influential on the success of the learning process. Student response to learning implementation consists of components, among others: (1). Compliance of the lecture with the lesson plan (learning implementation plan); (2) Discipline of lecturer on time of college; (3) The ability of lecturers in the presentation of lecture materials; (4) The ability of lecturers to motivate students; (5) The ability of lecturer improvisation; (6) Interaction of lecturers and students; (7) Conformity of exam with course material; (8) Lecturer's service to students; (9) The use of teaching aids by lecturers and (10) Mastery of material by lecturers [5]-[6]-[7]-[8]. The determinant factors that are not less important to the above are the degree of student satisfaction with facilities and utilization of institutional resources [9]-[10]-[11].

One of the causes of student difficulties in understanding English material is a conventional, one-way and monotonous learning strategy. Teaching strategy is one of the factors that determine the quality of the process and the quality of the learning outcomes of a course. Various strategies are introduced and have been practiced to improve the quality of teaching, but the really good results are still very few.

Various obstacles can be mentioned as the cause of the difficulty of efforts to improve the quality of education through the implementation of new methods is the reluctance of educators to implement the strategies offered, one of which causes the limited facilities and infrastructure [12]-[13]. With the rapid development of technology and information, the limitation of the real means is not a constraint anymore, so that needs to be made and implemented is a precise strategy so that educators can prepare the learning process well and learners get the most optimal benefits [14]-[15]-[16]. Based on the strategic plan of Politeknik Negeri Bali 2009 – 2014, there are several performance indicators that in the short term should be achieved. GPA (Comrade Achievement Index) 3.6 attached at the end of 2014 reached 3.43 only, so there should be efforts to increase in the future. Likewise, for the level of student satisfaction, continuous efforts need to increase student satisfaction levels, so that when the gap between expectations and student perceptions increasingly smaller. In order to achieve these two objectives, a new approach will be implemented: a simple interactive learning method that is able to maintain student concentration during the learning process.

## 2. Research Method

This research is an experimental research conducted on Engineering Engineering Program of Politeknik Negeri Bali. Research subjects are English courses taught to students of semester 2. Students of 2nd semester consist of three classes, each class there are 32 students. The number of classes used is 2 classes, so the total number of students involved in this study is 64 people. In order to know the effect of treatment/intervention on the subject condition, there will be a real experimental study using two crossover design. This cross-cutting design provides advantages in controlling biological variables between subjects and the sample requirements are only half the number of parallel design samples [17]-[18].

Assessment of quality of learning process done by research 2 cycle, where at each cycle ended with giving test/questionnaire. The object of research is the quality of student concentration during the English

lesson. The strategy to be implemented is to improve the mobility of students in the classroom by providing a more active role, among others: presenter of the student, the appointment of the pen by the students, who answer the other students. This method is done through classroom action research participant (classroom action research participant). Classroom action research is an integral part of learning that includes the stages: 1. Planning (planning); 2. Implementation of learning (action); 3. Observation of learning activities as well as evaluation of process and learning outcomes (observation and evaluation), and 4. Reflection of the process and learning outcomes (reflection). Data on student satisfaction on the learning process collected is the result of direct observation of student activities in the classroom and recorded with a list of questionnaires. Each variable is assessed using a 5-level Likert scale, which is excellent with a score of 5, both with a score of 4, good enough with a score of 3, less with a score of 2 and very less with a score of 1. The average score of each student is obtained by summing all score and divide it by the number of students. The final result is then analyzed descriptively qualitative. Student achievement in final score is calculated by weighting as follows: 10% daily quiz/test + 10% task + 10% report + 30% Middle Semester Exam + 40% Semester End Test.

Data obtained from the results of research on P0 and P1 then processed and analyzed. The program used is the application SPSS for Windows. The statistical tests that be used to process and analyze data from each measurement are 1. Descriptive analysis. The data obtained is processed and analyzed descriptively which includes average, standard deviation, and range; 2. Normality test. Data of each period of concentration and learning achievement were analyzed by normality test that is by Shapiro-Wilk test at 5% significance level ($\alpha$ = 0,05); 3. Test comparability. a. To know if there is any influence of environmental condition to sample, either before or after application of student mobility method in class and environmental influence to treatment, it will be compared between result of observation period 1 and period 2 which include environmental condition data such as wet temperature average, dry temperature and humidity and wind speed and light intensity. If the data is normally distributed, it is tested by a parametric statistic test, the Two Pair Sample T-test. If the data is not abnormal distribution with p-value <0.05 conducted Non Parametric test that is a test of difference Wilcoxon Signed Rank Test at significance level 5% ($\alpha$ = 0.05); b. Concentration data and learning achievement are processed by using the same reference. In the statistical hypothesis and decision rule use sample of learning achievement data. If the data is normally distributed with p> 0.05 followed by difference test of Two Pair Sample T-test at significance level 5% ($\alpha$ = 0.05) to the condition of P0 and P1. If the data is not abnormal distribution with p-value <0.05 nonparametric test is a test of difference of Wilcoxon Signed Rank Test on the level of significance 5% ($\alpha$ = 0.05) to subject condition before and after application of simple interactive learning method.

## 3. Results and Analysis

In the class, A group the average age of the students who were subjected was 19.25 ± 0.74 years, with a range of 18 to 20 years. In the class, B group is also in the range of 18-20 years, with the average age of 19.46 ± 0.72 years. Both data are not significantly different with p>0.05. This will justify the final conclusion that the results of the intervention are not biased due to the initial difference in subject conditions.

Table 1
Subject characteristics

| | No. | Description | average | Standard of Deviation | Range |
|---|---|---|---|---|---|
| Group A | 1 | Age (years) | 19.25 | 0.74 | 18 – 20 |
| Group B | 2 | Age (years) | 19.46 | 0.72 | 18 – 20 |

The result of normality test to environmental condition data, good for the condition of the learning environment of group A and B in period 1 and in period 2 indicate that normal distribution data that is

light intensity data, while dry temperature data, wet temperature, humidity, wind speed, and noise normally distributed. If one of the data is not normal then the test uses non-parametric test equipment.

Thus the data were tested by Mann-Whitney test. The results of data analysis of environmental conditions in the class can be seen in Table 2.

Table 2
Environment conditions

| No | Environment Indicators | Average | | | |
|---|---|---|---|---|---|
| | | Group A | | Group B | |
| | | Per 1 | Per 2 | Per 1 | Per 2 |
| 1 | Dry temperature (° Celsius) | 25.00 | 26.21 | 26.00 | 25.21 |
| 2 | Wet temperature (° Celsius) | 22.02 | 22.12 | 23.00 | 21.11 |
| 3 | Relative humadity (%) | 71.04 | 72.01 | 70.80 | 71.00 |
| 4 | Wind speed (m/min) | 0.20 | 0.10 | 0.10 | 0.10 |
| 5 | Noise (dBA) | 74.00 | 72.00 | 71.00 | 71.10 |
| 6 | Light Intensity (lux) | 278.20 | 287.00 | 273.60 | 277.00 |

Description : m/min = meter/minute

The average of dry temperature in class A in period 1 is 25.00 °Celcius and period 2 is 26.21 Celcius, whereas in class group B in period 1 is 26.00 Celcius and period 2 is 25.21 Celcius. The data of period 1 and period 2 in class A group were not significantly different, as well as data in group B. Status did not differ significantly also occurred in wet temperature data, relative humidity, wind speed, noise and light intensity between data period 1 and period 2, both class A and B. This indicates that environmental conditions have no effect on the outcome of the intervention.

This will reinforce the final conclusion that the results of the intervention are not biased due to differences in environmental conditions.

Based on the calculation of Bourdon Wiersma test using Quantitative interpretation calculation, the calculation results are presented in Table 3. below.

Table 3
Concentration indicators

| No | Concentration Indicators | Average | | | |
|---|---|---|---|---|---|
| | | Group A | | Group B | |
| | | Per 1 | Per 2 | Per 1 | Per 2 |
| 1 | Speed (minutes) | 10.81 | 9.39 | 9.22 | 10.79 |
| 2 | Accuracy (times) | 5.08 | 2.71 | 2.73 | 5.04 |
| 3 | Constancy (minutes) | 2.99 | 2.24 | 2.21 | 2.87 |

The subject in Group A whose concentration was observed in the first period, where subjects have not been given treatment showed the speed of completing the task was 10.81 minutes and improved in period 2 to 09.39 minutes or increased by 13.14%. In period 2 subjects were given the treatment of interactive tasks that caused the students to increase their mobility.

The accuracy in group A period 1 is calculated based on the number of items the subject made mistake while working on the Bourdon Wiersma test. More and more mistakes can be said the subject more and less conscientious. In Group A period 1 the subject made an average error of 5.08 times. After being given treatment in period 2, subjects experienced a performance increase of 46.65% with an error of 2.71 times.

The other concentration indicator, ie, the constancy also improved by 25.08% in period 2. To get a clearer picture, it is good to see also the conversion value of the quantitative interpretation table in the Table below.

From the conversion table of values on the quantitative interpretation can be seen that the speed of the subject has increased from 8 to 9, as well as indicators of accuracy increased from 7 to 8. Constancy increased from 8 to 8.5. In contrast to group B, where subjects were given treatment at period 1, the values on the speed indicator, accuracy, and constancy experienced the same thing.

Table 4
Conversion of values on quantitative interpretation

| No | Concentration Indicators | Value | | | |
|---|---|---|---|---|---|
| | | Group A | | Group B | |
| | | Per 1 | Per 2 | Per 1 | Per 2 |
| 1 | Speed (minutes) | 8.00 | 9.00 | 9.00 | 8.00 |
| 2 | Accuracy (times) | 7.00 | 8.00 | 8.00 | 7.00 |
| 3 | Constancy (minutes) | 8.00 | 8.50 | 8.50 | 8.00 |

From the Weighted Score conversion table (WS) also shows the same thing. The value of WS in period 1 in subject A group was at number 12 and rose significantly to 14 in period 2. WS value on the indicator of undetectability was not detected in Group A data in period 1, while in period 2 was at level 13.

The value of the WS in the indicator of constancy increased by 7.7% from period 1 to period 2, ie from WS value 12 to 13. As the value in the data group A, so also occurs in the data group B.

Table 5
Conversion of weighted scores (WS) on quantitative interpretation

| No | Concentration Indicators | Weighted Scores (WS) | | | |
|---|---|---|---|---|---|
| | | Group A | | Group B | |
| | | Per 1 | Per 2 | Per 1 | Per 2 |
| 1 | Speed (minutes) | 12 | 14 | 14 | 12 |
| 2 | Accuracy (times) | - | 13 | 12 | - |
| 3 | Constancy (minutes) | 12 | 13 | 13 | 12 |

From the Weighted Score conversion table (WS) also shows the same thing. The value of WS in period 1 in subject A group was at number 12 and rose significantly to 14 in period 2. WS value on the indicator of undetectability was not detected in Group A data in period 1, while in period 2 was at level 13.

The value of the WS in the indicator of constancy increased by 7.7% from period 1 to period 2, ie from WS value 12 to 13. As the value in the data group A, so also occurs in the data group B.

Table 6
Conversion of groups on quantitative interpretation

| No | Concentration Indicators | Group | | | |
|---|---|---|---|---|---|
| | | Group A | | Group B | |
| | | Per 1 | Per 2 | Per 1 | Per 2 |
| 1 | Speed (minutes) | Good Enough | Good | Good | Good Enough |
| 2 | Accuracy (times) | Enough | Good Enough | Good Enough | Enough |
| 3 | Constancy (minutes) | Good Enough | Good Enough | Good Enough | Good Enough |

This academic value is in line with the concentration indicator on the conversion of classes on quantitative interpretation, especially for the indicator of speed and accuracy indicating that the status increase, ie from good enough to good and from enough to good enough.

Table 7
Assessment of student learning achievement

| No | Rating Components | Average | | | |
|---|---|---|---|---|---|
| | | Group A | | Group B | |
| | | Per 1 | Per 2 | Per 1 | Per 2 |
| 1 | Quiz 1 | 74 | 91 | 92 | 73 |
| 2 | Quiz 2 | 76 | 85 | 87 | 76 |
| 3 | Task 1 | 73 | 89 | 88 | 75 |
| 4 | Task 2 | 75 | 90 | 93 | 70 |
| 5 | Report | 70 | 94 | 96 | 72 |
| 6 | UTS (midterm exam) | 72 | | 89 | |
| 7 | UAS (final exam semester) | | 90 | | 77 |
| | Average | 73.33 | 89.83 | 90.83 | 73.83 |

Student learning achievement of group A in period 1 was average 73.33 and increased by 18.37% to 89.83 in period 2. As explained earlier that this improvement in achievement is due to the interventions are given to the learning process. The process in question is teaching materials and teaching methods. On the contrary in group B, the intervention was given in period 1.

The learning achievement outcomes in period 1 looked better compared to period 2. For quiz 1, the average repeat result was 92 in period 1 and decreased drastically by 20.65% to 73.

## 4. Conclusion

Based on the discussion in the previous chapter can be concluded some of the essences of research to answer the existing problems, as follows. A simple interactive learning method is one way to maintain student concentration so that the student's score can be improved. The magnitude of change in concentration and achievement is as follows. Student learning achievement of group A in period 1 is the average of 73.33 and an increase of 18.37% to 89.37 in period 2. As has been explained previously that the improvement of this achievement is due to the intervention is given in the learning process. The process in question is teaching materials and teaching methods, so that student concentration can be maintained. This academic value is in line with the concentration indicator on the conversion of classes on quantitative interpretation, especially for the indicator of speed and accuracy indicating that the status increase, ie from good enough to good and from enough to good enough.

On the contrary in group B, the intervention is given in period 1. The learning achievement in period 1 looks better compared to period 2. For task 1, the average student's academic value is 88 in period 1 and decreases dramatically by 14.77% to 75. This is also consistent with the concentration indicator on the conversion of classes on quantitative interpretation, especially for the indicator of speed and accuracy which indicates a decrease in status, ie from good to good enough and from good enough to enough. Uniquely the value of the constants for the conversion of classes on quantitative interpretation has never changed and stagnated on good enough status.

Based on the above conclusions can be submitted some suggestions for researchers who will take a similar topic, as follows. Need to be studied the relationship of student achievement with physiology aspect, because physiology aspect which less comfortable will have an effect on the low level of accuracy. Need to be studied the benefits of spatial layout on student achievement. It is necessary to study the effect of LCD placement on the comfort and satisfaction of students.

**Ethics**

This article is original and contains unpublished material. The corresponding author confirms that all of the other authors have read and approved the manuscript and no ethical issues involved.

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