The Effectiveness of Direct Learning in Academic Writing
Referred to Students Reading Habit in Indonesia

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Abstract
This research was conducted to uncover the effectiveness of Direct Learning in academic writing. The objectives of the research are: (1) to find which method is the most effective among Direct Learning, Inquiry Learning and Problem Based Learning methods in academic writing, (2) to find which is more influencing between high reading habit and low reading habit in academic writing, and (3) to know the interaction between the three methods and the reading habit in academic writing.

The research finds that: (1) Direct Learning is the most effective method in academic writing, whereas Inquiry Learning has the same effectiveness with Problem Based Learning (2) high reading habit is more influencing in academic writing, and (3) there is an interaction between Direct Learning, Inquiry Learning and Problem Based Learning methods and students reading habit toward academic writing.

Keywords: Direct Learning, academic writing, reading habit

1. Introduction
Academic writing is still being a difficult thing for secondary students in Indonesia. Whereas writing skill and critical thinking are crucial especially it becomes an important skill used in higher level of their education and indirectly for their daily life. The empirical data were drawn from prior research to know why academic writing was a difficult subject for students. One factor influencing the bad results in academic writing is the method applied by teacher in teaching the subject. The inappropriate method applied in the learning makes the mastery of the skill not optimally gained.

Data taken from secondary teachers in XI grade especially Indonesian language depicted that in Indonesian subject, academic writing was not paid much attention. It was because academic writing was practically applied in the last term of study (or XII grade) as one of the requirements in attending national examination. The material of academic writing itself was taught separately so it did not influence better in the academic writing as whole writing skill. For the results, some teacher did not apply the appropriate method in teaching academic writing and the students’ academic writing results were not satisfying.

Academic writing taught in senior high schools in Indonesia is in the form of reports (research or observation reports), as stated in the Standar Kompetensi Lulusan (Graduate Competence Standard) issued by Departemen Pendidikan Nasional or National Education Department (2008). Based on the basic competence in writing skill in graduate competence standard, senior high schools should be able to write an academic writing in the form of reports either research or observational report.

2. Review of Related Literature
2.1. Direct Learning
Bandura in Pritchard and Woolard (2010) stated that students will learn better if they have frequent interaction with knowledgeable others. It means that learning process is emphasized to the process on how the students imitate the knowledge others (teachers) as models. This learning process view is relevant to the nature of Direct Learning which is Muijs and Reynolds (2008) stated Direct Learning as a teacher directed in which the teacher gives instruction directly to the students. Carnine in Schug et al. (2001) stated that Direct instruction is an approach to teaching. It is skills-oriented, and the teaching practices. It implies are teacher-directed. It emphasizes the use of small-group, face-to-face instruction by teachers and aides using carefully articulated lessons in which cognitive skills are broken down into small units, sequenced deliberate, and taught explicitly. Relevant with Carnine, Arends (2008) defined that direct instruction is a teaching approach in which the lesson is goal-directed and the learning environment is structured by teacher.

Thus, Direct Learning (or direct instruction, as stated in the definition) is a method to teaching which is teacher-focused and the lesson is sequentially structured. The students will have their knowledge and skill by imitating, demonstrating and finally practicing the skills independently. The term of method used here is referred to the method term defined by Anthony (1963) and Richard dan Rogers (1982) since approach is used to define the approach is assumptions, beliefs and theories about the nature of language and language learning not for the overall plan for systematic presentation of language based upon a selected approach.

Heward (2000) stated that Direct Learning had two main rules, teach more in less time and a controlled
Reading habit refers to the amount of the different kinds of reading materials read by an individual, the frequency of reading, and the average time spent on reading material (Abeyrathna, 2004). Mngoma (1997) defined reading habits as a settled reading tendency or disposition (common to both parents and their children) measured by the number of different items read and time spent on reading. Based on the definition above, we can conclude that reading habit refers to the attitude representing preference in reading activity which is shown from the amount of the reading materials read by an individual, the frequency of reading and the average time spent on reading so it becomes a settled reading tendency.

Reading has high relationship with writing. Given (2007) stated that both activities related to the cognitive matter in our brain. Noor (2011) stated that learn new information and new information and become able to synthesize, evaluate and interpret in order to learn more about their subject matter. Allen et al. (in Santrock, 2007) stated that one’s ability to remind and recall new information about a subject depends on what he knows already. Here, writing as expressing knowledge in series of words needs prior knowledge which is gained from reading. Reading activity will make the reader have ability to think and comprehend information and then be able to use...
the information in their life such as in writing activity.

3. Research Methodology
An experiment research with 3 x 2 factorial design was conducted in this research. The independent variable, defined as manipulative variables were learning methods and reading habit defined as attributive variables. The dependent variable hence defined as the academic writing mastery. The reading habit was categorized in high and low. The high and low reading habit was determined by dividing the ordinal scale data gained referring to the means of the questionnaires scores. The academic writing mastery was scored with the interval scale referring to the assessment rubric.

The population in this research was 2375 from 17 high schools in Purbalingga regency representing senior high students in Indonesia. After sampling, it was determined 360 students as samples, 120 students for each manipulative variable (learning method). Here, cluster random sampling was chosen to determine the number of sample.

Instrument used in this research was questionnaire and test. The questionnaire was used to gather data about students reading habit and the test was used to gather data about students academic writing mastery. The validity of questionnaire was measured with Product Moment and the reliability was measured with Alpha Cronbach. While the validity of the writing test instrument was measured with focus group discussion and expert judgment and the reliability is measured with Alpha Cronbach. Based on the measurement of the both instruments, it was resulted that the instruments were valid and reliable.

The data collected here, then analyzed by two way Annova and Scheffe Post-Hoc test to know the effectiveness rate among the method and to know the interaction between the methods and reading habit to the academic writing.

4. Discussion
The data gathered from the writing test was analyzed by two way Annova. Before data analysis the data was tested its normality and homogeneity since two way Annova can be computed if the data is normal and homogeny. The normality test computed with Lilliefors test. The homogeneity computed with Bartlett test. The significant level (α) was 0.05. The results of the both test showed that the population of the samples were in normal distribution and homogeneity, so the data analysis could be computed. Besides both requirements test, the balance test with one way Annova was conducted to know the balance of the ability of the sample before treatments. The test showed that the samples had balance ability in academic writing.

The hypotheses proposed in the research were as follows.

a. \( H_{1A} \): there is a difference in the application of Direct Learning, Inquiry learning and Problem Based Learning in academic writing.

b. \( H_{1B} \): there is a difference ability between students with high reading habit and the low reading habit.

c. \( H_{1AB} \): there is an interaction between learning methods and reading habit in academic writing.

After calculating and analyzing data gained from post test, here is the summary of the data analysis with two way Annova to answer the hypotheses.

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>P</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Method (A)</td>
<td>8067.201</td>
<td>2</td>
<td>4033.600</td>
<td>40.164</td>
<td>3.021</td>
<td>Significant</td>
</tr>
<tr>
<td>Reading Habit (B)</td>
<td>15094.549</td>
<td>1</td>
<td>11094.549</td>
<td>110.471</td>
<td>3.868</td>
<td>Significant</td>
</tr>
<tr>
<td>Between Group (AB)</td>
<td>882.527</td>
<td>2</td>
<td>441.264</td>
<td>4.394</td>
<td>3.021</td>
<td>Significant</td>
</tr>
<tr>
<td>Within Group (G)</td>
<td>35551.988</td>
<td>354</td>
<td>100.429</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (T)</td>
<td>55596.265</td>
<td>359</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the table above it can be drawn conclusions as follows:

a. For learning method, if \( F_A \) compared with \( P_A \) it was 40.164 > 3.021 therefore \( H_{1A} \) is rejected. It means that there is a significant difference in students academic writing mastery taught with Direct, Inquiry, and Problem Based Learning

b. For reading habit, if \( F_B \) compared with \( P_B \) it was 110.471 > 3.868 therefore \( H_{1B} \) is rejected. It means that there is a significant difference in students academic writing mastery between students with high reading habit and low reading habit.

c. For interaction, if \( F_{AB} \) compared with \( P_{AB} \) it was 4.394 > 3.021 therefore \( H_{1AB} \) is rejected. It means that there is an interaction between the learning method and reading habit in academic writing.

To know which one is the most effective among Direct Learning, Inquiry Learning and Problem Based Learning in academic writing, between high and low reading habit, and the interaction within cells, here is the marginal mean score of the variables.
Table 2. Means of Each Cell of Academic Writing Results

<table>
<thead>
<tr>
<th>Learning Methods (A)</th>
<th>Reading Habit (B)</th>
<th>Marginal Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High (B₁)</td>
<td>Low (B₂)</td>
</tr>
<tr>
<td>Direct Learning (A₁)</td>
<td>80.64</td>
<td>66.31</td>
</tr>
<tr>
<td>Inquiry Learning (A₂)</td>
<td>67.04</td>
<td>60.17</td>
</tr>
<tr>
<td>Problem Based Learning (A₃)</td>
<td>69.32</td>
<td>57.09</td>
</tr>
<tr>
<td>Marginal means</td>
<td>72.10</td>
<td>61.43</td>
</tr>
</tbody>
</table>

The marginal means above were used to compare the effectiveness of each method based on the accepted H₁A that stated there is a significant difference between Direct Learning, Inquiry Learning and Problem Based Learning and the interaction between the method and reading habit to academic writing since the third hypothesis stated that there is an interaction between learning methods and reading habit in academic writing. The test used in the testing is Scheffe Post-Hoc test.

Here is the result of the Scheffe Post-Hoc test to know which is the most effective among the three methods and the interaction between learning methods and reading habit.

a. The difference of the mastery of academic writing among students taught with Direct Learning, Inquiry Learning and Problem Based Learning

The summary of Scheffe Post-Hoc test between the rows (comparison between the three methods) can be seen as follows.

Table 3. Scheffe Post-Hoc Test Summary Between Rows

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>X₁</th>
<th>X₂</th>
<th>df</th>
<th>EMS</th>
<th>F</th>
<th>P</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₀: μ₁ = μ₂</td>
<td>73.35</td>
<td>63.72</td>
<td>(2; 354)</td>
<td>100.43</td>
<td>55.40</td>
<td>6.042</td>
<td>Significant</td>
</tr>
<tr>
<td>H₀: μ₁ = μ₃</td>
<td>73.35</td>
<td>64.02</td>
<td>(2; 354)</td>
<td>100.43</td>
<td>52.01</td>
<td>6.042</td>
<td>Significant</td>
</tr>
<tr>
<td>H₀: μ₂ = μ₃</td>
<td>63.72</td>
<td>64.02</td>
<td>(2; 354)</td>
<td>100.43</td>
<td>0.50</td>
<td>6.042</td>
<td>Not Significant</td>
</tr>
</tbody>
</table>

Based on the Scheffe Post-Hoc test between the rows (among the three methods) it is shown that: (1) between Direct Learning and Inquiry Learning, as well as Direct Learning and Problem Based Learning, the test was significant. It means that the null hypothesis is rejected. Because the marginal mean of Direct Learning is higher than Inquiry and Problem Based Learning, it can be inferred that Direct Learning is the most effective method in academic writing rather than Inquiry and Problem Based Learning, and (2) between Inquiry Learning and Problem Based Learning, the test result is not significant, so it can be inferred that students taught with Inquiry and Problem Based Learning has the same ability. In other words, Inquiry Learning has the same effectiveness in academic writing with Problem Based Learning.

Based upon the results above, it can be concluded that Direct Learning is the most effective method to teach academic writing. Students taught with Direct Learning achieved better than taught Inquiry and Problem Based Learning. This finding supports researches conducted by Dean and Kuhn (2006) and Bertsch et al. (2007). Students progress in learning is more controlled by teacher. It gives many advantages since guidance is important in students learning. Here, guidance is used as a scaffold before the students are able to do all the skill by themselves. This characteristic does not occur in method with minimal guidance as Inquiry and Problem Based Learning (Alfieri et al., 2011; Brickman et al., 2009; Kirschner et al., 2006). The minimally guided method can not optimally reach learning goal and waste more time to work than paying attention to the learning progress.

This research also finds that students with high reading habit has better achievement in academic writing than students with low reading habit. This finding is relevant to the research conducted by Majid and Tan which found that students who have hobby, motivation and much time to read, in fact, have better language ability and their academic achievement. It also supports researches conducted by Gaona and Gonzales (2010) and Epting et al. (2013) which also find that students who have high quality writing read more.

b. The difference of the mastery of academic writing between students with high reading habit and low reading habit

The difference of the mastery of academic writing between students with high reading habit and low reading habit did not need Scheffe Post-Hoc Test although there is a significant difference shown after the two way Annova. This is because the variables compared here were only two variables, high and low reading habit. The marginal mean for students with high reading habit is 71.10 and marginal mean for students with low reading habit is 61.43. Based on the marginal mean gained, it can be drawn a conclusion that students with high reading habit is better in academic writing than students with low reading habit.

c. Interaction between the learning method and reading habit in academic writing

The interaction between learning methods (Direct Learning, Inquiry learning and Problem Based Learning and reading habit can be shown after Scheffe Post-Hoc test. Here is the Scheffe Post-Hoc test summary between cells.
in the columns and rows (interaction between the methods and reading habit).

### Table 4. Scheffe Post-Hoc Test Summary Between Cells in Column and Rows
(Interaction between Methods and Reading Habit in Academic Writing)

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>$X_i$</th>
<th>$X_j$</th>
<th>df</th>
<th>EMS</th>
<th>F</th>
<th>P</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_0: \mu_{A1B1} = \mu_{A1B2}$</td>
<td>80.64</td>
<td>66.31</td>
<td>(5; 354)</td>
<td>100.43</td>
<td>61.27</td>
<td>11.195</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_0: \mu_{A2B1} = \mu_{A2B2}$</td>
<td>67.04</td>
<td>60.17</td>
<td>(5; 354)</td>
<td>100.43</td>
<td>14.06</td>
<td>11.195</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_0: \mu_{A3B1} = \mu_{A3B2}$</td>
<td>69.32</td>
<td>57.09</td>
<td>(5; 354)</td>
<td>100.43</td>
<td>43.87</td>
<td>11.195</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_0: \mu_{A1B1} = \mu_{A2B1}$</td>
<td>80.64</td>
<td>67.04</td>
<td>(5; 354)</td>
<td>100.43</td>
<td>55.67</td>
<td>11.195</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_0: \mu_{A1B1} = \mu_{A3B1}$</td>
<td>80.64</td>
<td>69.32</td>
<td>(5; 354)</td>
<td>100.43</td>
<td>40.28</td>
<td>11.195</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_0: \mu_{A2B1} = \mu_{A3B1}$</td>
<td>67.04</td>
<td>69.32</td>
<td>(5; 354)</td>
<td>100.43</td>
<td>1.08</td>
<td>11.195</td>
<td>Not significant</td>
</tr>
<tr>
<td>$H_0: \mu_{A1B2} = \mu_{A2B2}$</td>
<td>66.31</td>
<td>60.17</td>
<td>(5; 354)</td>
<td>100.43</td>
<td>11.16</td>
<td>11.195</td>
<td>Not significant</td>
</tr>
<tr>
<td>$H_0: \mu_{A1B2} = \mu_{A3B2}$</td>
<td>66.31</td>
<td>57.09</td>
<td>(5; 354)</td>
<td>100.43</td>
<td>23.76</td>
<td>11.195</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_0: \mu_{A2B2} = \mu_{A3B2}$</td>
<td>60.17</td>
<td>57.09</td>
<td>(5; 354)</td>
<td>100.43</td>
<td>2.59</td>
<td>11.195</td>
<td>Not significant</td>
</tr>
</tbody>
</table>

Based upon the Scheffe Post-Hoc test above, it can be inferred that:

1. Students with high reading habit taught with Direct Learning has better achievement in academic writing than students with low reading habit.
2. Students with high reading habit taught with Inquiry Learning has better achievement in academic writing than students with low reading habit.
3. Students with high reading habit taught with Problem Based Learning has better achievement in academic writing than students taught with Inquiry Learning and Problem Based Learning.
4. Students with high reading habit taught with Inquiry Learning has the same achievement in academic writing with students taught with Problem Based Learning.
5. Students with low reading habit taught with Direct Learning has the same achievement in academic writing with students taught with Inquiry Learning.
6. Students with low reading habit taught with Direct Learning has better achievement in academic writing than students taught with Problem Based Learning.
7. Students with low reading habit taught with Inquiry Learning has better achievement in academic writing than students taught with Problem Based Learning.
8. Students with low reading habit taught with Inquiry Learning has better achievement in academic writing than students taught with Problem Based Learning.

Conclusions from multiple comparison test using Scheffe Post-Hoc test between learning methods to the reading habit in academic writing generally shows that Direct Learning is more effective than Inquiry and Problem Based Learning in academic writing. Inquiry and Problem Based Learning have the same effectiveness for students with high reading habit. However, Direct Learning has the same effectiveness as Inquiry for students with high reading habit and Problem Based Learning has the same effectiveness as Inquiry for students with low reading habit. On the other hand, Direct Learning is more effective than Problem Based Learning for students with low reading habit.

### 5. Conclusion

Based upon the results of the research, the conclusions of the research can be stated as follows. First, Direct Learning is the most effective method to teach academic writing compared with Inquiry Learning and Problem Based Learning. Whereas the Inquiry Learning has the same effectiveness with Problem Based Learning to teach academic writing. Second, students with high reading habit have better achievement than students with low reading habit. Third, there is an interaction between learning method and reading habit in academic writing.

It is suggested that academic writing should be taught with more guidance since the complexity of the material and conventions used in the writing. Future studies may be conducted to the students in senior high schools in other areas with bigger numbers of sample to obtain comprehensive view of academic writing learning methods in Indonesia. Moreover, to view the whole picture of the academic writing learning methods, it is suggested that the methods on others factors such as motivation, attitude be explored by future studies.

### References


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