GUNADARMA UNIVERSITY
FACULTY OF LETTERS

A COMPARATIVE STUDY BETWEEN
NATURAL APPROACH AND QUANTUM LEARNING METHOD
IN TEACHING VOCABULARY TO THE STUDENTS OF ENGLISH CLUB
AT SMPN 1 RUMPIN

Written by:

Name: Rezza Sanjaya
NPM: 10603100
NIRM: 20033137200350100
Major: English Literature
Advisor 1: Dr. Rita Sutjiati
Advisor 2: Drs. Ichwan Suyudi, MM

An Undergraduate Thesis
Submitted To the Faculty of Letters
As a Partial Fulfillment of the Requirements For
Undergraduate Degree in English Literature

JAKARTA
2008
ABSTRACT

Rezza Sanjaya. 2008. A Comparative Study between Natural Approach and Quantum Learning Method in Teaching Vocabulary to the Students of English Club at SMPN 1 Rumpin. Thesis. English Department. Faculty of Letters. GunadarmaUniversity. Advisors: (1) Dr. Rita Sutjiati; (2) Drs. Ichwan Suyudi, MM.

There are many techniques used in teaching English vocabulary. In this thesis the writer uses two different techniques, quantum learning and natural approach as a comparative study to find the effective technique in teaching English vocabulary. The writer observed two groups, namely Group A who were taught by using quantum learning and group B who were taught using natural approach.

The aims of study from this thesis are to find out the similarities and differences between natural approach and quantum learning method and also to describe the way the teacher teaches vocabulary when natural approach and quantum learning method implement in school and what kind of vocabulary that used by the teacher, the problems faced by the teacher in teaching English vocabulary when implement natural approach and quantum learning method, the solutions used by the teacher to overcome the problems when natural approach and quantum learning method implement in teaching English vocabulary, and of course to find out method which is better to teach vocabulary.

The result of the analysis shows that the students are more interested in English vocabulary using quantum learning than using natural approach. As the result of the study shows that observed $t = 1.874$ and the table $t = 1.7235$ (observed $t >$ table $t$). It means that teaching vocabulary using quantum learning is more effective than using natural approach.
1. **Background of Study**

Socializing and communicating to other people have already been our daily activities in our lives, of course to do such those activities, we need one of the most important basic element which is language. It is essential to use a good language to communicate with someone, and with a good language you surely could overcome any obstacles situation in this globalization era. English as a foreign language is well known as one of the most important language for development of every segments structure in this country, such as technology in factory, education at school, business for economic development, and of course art and culture.

Yet there is also one important aspect we need to have a good and fluent conversation, this important aspect is vocabulary. The writer noticed that most of the students are having some lacks in memorizing and learning the vocabularies into the target language. This could possibly because of the unsuitable approach and teaching methods given by the teacher.

Therefore, there are some effective methods to teach English, especially how to teach vocabulary to the young learners. We can implement one of the methods that usually used at the English course, known as *natural approach method*; as part of the natural approach, according to the writer’s observation, students listen to the teacher using the target language communicatively from the very beginning. It has certain similarities with the much earlier direct method, with the important exception that students are allowed to use their native language alongside the target language as part of the language learning process. In early
stages, students are not corrected during oral production, as the teacher is focusing on meaning rather than form (unless the error is so drastic that it actually hinders meaning). On the other hand, we use a quantum learning method in which implemented by many teachers in many schools recently. In this method, the teacher should creates an enjoyable learning throughout the learning process by the games, pictures, story telling, etc. and by all of those processes, the students` active participant will obviously seen.

These conditions invite the writer`s curiosity to examine carefully whether natural approach (English course method) is more effective than quantum learning method (English school method), a comparative study; a comparative study between quantum learning and natural approach method in teaching vocabulary to the student of English club at SMPN 1Rumpin.

2. **Problem formulation**

   There are four problems formulated:

   a. What are the similarities and differences between natural approach and quantum learning method?

   b. How does the teacher teach vocabulary when natural approach and quantum learning method implement in school and what kind of vocabulary that used by the teacher?

   c. What problems faced by the teacher when natural approach and quantum learning method implement in teaching English vocabulary?
d. What solutions used by the teacher to overcome the problems when natural approach and quantum learning method implement in teaching English vocabulary?

e. Which method is better in teaching English vocabulary?

3. **Theory**

   - **Definition of Natural Approach**

   Natural approach is an approach that combines acquisition and learning as a means of facilitating language development in adults, it is focusing on the wide range of activities including games, role plays, dialogs, group work and discussions. The Natural Approach was developed by Tracy Terrell and Stephen Krashen, starting in 1977. It came to have a wide influence in language teaching in the United States and around the world.

   - **Definition of Quantum Learning**

   Quantum Learning is a powerful and engaging teaching and learning methodology that integrates best educational practices into a unified whole. This synergistic approach to the learning process covers both theory and practice.

   It has been proven to increase academic achievement and improve students’ attitudes toward the learning process. These integrated, comprehensive programs turn abstract theory into practical applications that can be used immediately in the classroom. In Quantum Learning, classrooms, workshops, schools and districts nationwide and worldwide, teachers, administrators and students gain the skills and motivation to contribute to creating an academically
and socially successful school community. Quantum learning is derived from an effort of a Bulgarian educator Goergi Lazanov. He was implemented an experiment which he called a suggestology (suggestopedia). He convinced that a suggestion is surely be able influence the learning process, whether it is a positive or a negative suggestion.

4. Method

In generally, this experiment is to find out which methods are the most effective and efficient in learning English vocabulary. In here, the design of this research was a quantitative method. According to David Wilkinson on his book The Complete Guide to Practitioner Research states; survey, test, structured, interview, library experiment, and non-permanent observation are usually categorized as quantitative data collection method. Quantitative data are those types of data that can usually be reduced to numerical form. The analysis of these data types involves manipulating them in some way and/or applying some form of statistical test (Wilkinson, 2000:7 and 81).

Therefore, quantitative method in this thesis is reporting the result of the test that gave by the teacher after taught English vocabularies in two difference methods which are; natural approach and quantum learning.

Data Analysis Procedure

Soon after getting the students’ test result, then the writer does the following steps:

1. Correcting the answer sheet of the test to get the students’ score.
2. Calculating the source from the control group and experimental group.

3. Calculating the score to get

\[ \bar{X}_1 \text{ and } \bar{X}_2 = \text{Average score of the experimental and control group.} \]

\[ SS_1 \text{ and } SS_2 = \text{Sum of the squared deviation scores at experimental and control group.} \]

4. After getting the data, then the writer analyzed the data to get \( t \)-test and then the \( t \)-test result is compared with \( t \)-table to know whether the methods are effective or not. To find the value of \( t \)-table of degrees of freedom (df), we can use formula \( df = n_1 + n_2 - 2 \) with the level of significance is \( \alpha = 0.05 \).

According to *Fisher and Yates* taken from the book entitled statistical for Biological, Agricultural, and Medical Research written by Bambang Kustituanto and Rudy Badrudin, the \( t \)-test formula is:

\[
t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{SS_1 + SS_2}{n_1 + n_2 - 2}} \left( \frac{1}{n_1} + \frac{1}{n_2} \right) \left( \frac{n_1 + n_2 - 2}{n_1 n_2} \right)}
\]
Where:
\[ \bar{x}_1 = \text{Average score of the experimental group} \]
\[ \bar{x}_2 = \text{Average score of the control group} \]
\[ SS_1 = \text{Sum of the squared deviation scores at the experimental group} \]
\[ SS_2 = \text{Sum of the squared deviation scores at the control group} \]
\[ n_1 = \text{Number of the students in the experimental group} \]
\[ n_2 = \text{Number of the students in the control group} \]

5. **Population**

The source of the data in this thesis is an English club student member at SMPN 1 Rumpin; in here the member consists of 20 students which divided into two groups; group A and group B.

1. **(Group A) consists of 10 students**

This class is used as an experimental group, which taught using quantum learning. From the population above, the writer choose randomly 10 students out of 20 students.

2. **(Group B) consists of 10 students**

This class is used as a control group, which taught using natural approach. From the population above, the writer choose randomly 10 students out of 20 students.
6. The technique in teaching English vocabulary using quantum learning in group A (experimental group)

The writer in SMPN 1 Rumpin used Quantum learning in teaching English vocabulary by using several steps:

1. The teacher greets to the students.
2. The students answer the teacher’s greets.
3. The teacher introduced himself.
4. The teacher takes the attendance list to recognize the name of the students.
5. The teacher starts the lesson by dividing the class into two groups, wherein the first group is called group “HI” and the second group is called group “Hello”.
6. The teacher asks them to compete each other by searching as many as possible all kind of human personalities in their own dictionary in only 15 – 20.
7. The teacher asks them to step forward in front of the class and write it down on the blackboard. Those who collected more words which reflect human personalities, will be given a big applause from their opponent, and for the opponent side who become a loser in this game, are going to be punished by dancing in front of the class.
8. The teacher asks them to make note.
9. The teacher progresses the lesson by teaching them using “be” and “linking verb” as a facility to make sentences by giving the example of each method.

10. After understanding the lesson, students are given a new game about making other sentences by using those “be” and “linking verb” on the blackboard.

11. The students who have the correct sentences are going to have a surprised present from the writer.

12. The students are going to be reminded about all kinds of human personalities and the way to make it into sentences before doing the test.

### 6.1 The result of the data analysis of group A (experimental group)

Table 1: Computation of the t-observed for Experimental group

<table>
<thead>
<tr>
<th>n_i</th>
<th>x_i</th>
<th>x_i^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>81</td>
</tr>
<tr>
<td>4</td>
<td>9</td>
<td>81</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
<td>81</td>
</tr>
<tr>
<td>6</td>
<td>8</td>
<td>64</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td>64</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>64</td>
</tr>
<tr>
<td>9</td>
<td>8</td>
<td>64</td>
</tr>
<tr>
<td>10</td>
<td>7</td>
<td>49</td>
</tr>
<tr>
<td>∑</td>
<td>86</td>
<td>748</td>
</tr>
</tbody>
</table>
\[
\bar{x}_1 = \text{Average score of the experimental group} \\
= 86 \\
n_1 = \text{Number of the students in the experimental group} \\
= 10 \\
\frac{\bar{x}_1}{n_1} = \frac{86}{10} \\
= 8.6 \\
SS_1 = \text{Sum of the squared deviation scores at the experimental group} \\
\sum x_1^2 = 748 \\
SS_1 = \frac{\sum x_1^2 - (\sum x_1)^2}{n_1} \\
= \frac{748 - (86)^2}{10} \\
= \frac{748 - 7396}{10} \\
= 748 - 739.6 \\
= 8.4
\]

7. The technique in teaching English vocabulary using natural approach in group B (control group)

The writer in SMPN 1 Rumpin used natural approach in teaching English vocabulary by using several steps:

1. The teacher greets to the students.
2. The students answer the teacher’s greets.

3. The teacher introduced himself.

4. The teacher takes the attendance list to recognize the name of the students.

5. The teacher starts the first material by attract the students’ curiosity. The teacher asks them whether do they like watching television program or not, considering the material is all about the human personalities, so, the teacher is going to take the character from the television program, wherein each of character were well known by the students. However, the material should still remain a mystery for the students.

6. The teacher asks each character’s personality on the television program they had chosen before.

7. The teacher writes it down on the blackboard and mentions the other human personalities and also shows how to pronounce it correctly.

8. After the students named it all, then the writer explains of how important it is to learn about human personality, and its advantages in wide range of communities. Then, explain to them that they are going to learn about human personalities.

9. The teacher asks them to make note, then the teacher progress the lesson into the next step. In here, the students are going to be learning how to make sentences from those words.
10. Teach using “be” and “linking verb” as a facility to make sentences and giving the example of each method.

11. The students come forward in front of the class, try to search of other sentences asked by the teacher.

12. The students are going to be reminded about all kinds of human personalities and the way to make it into sentences before doing the test.

7.1 The result of the data analysis of group B (control group)

Table 1: Computation of the t-observed for Control group

<table>
<thead>
<tr>
<th>n1</th>
<th>x2</th>
<th>x2^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
<td>64</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>64</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>49</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>49</td>
</tr>
<tr>
<td>5</td>
<td>7</td>
<td>49</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>36</td>
</tr>
<tr>
<td>7</td>
<td>6</td>
<td>36</td>
</tr>
<tr>
<td>8</td>
<td>6</td>
<td>36</td>
</tr>
<tr>
<td>9</td>
<td>6</td>
<td>36</td>
</tr>
<tr>
<td>10</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>Σ</td>
<td>66</td>
<td>444</td>
</tr>
</tbody>
</table>

\[ \overline{x_2} = \text{Average score of the control group} \]

\[ = 66 \]
\[ n_2 = \text{Number of the students in the control group} \]
\[ = 10 \]
\[ \frac{x_2}{10} = 66 \]
\[ = 6.6 \]
\[ SS_2 = \text{Sum of the squared deviation scores at the control group} \]
\[ \sum x_2^2 = 444 \]
\[ SS_2 = \sum x_2^2 - \frac{(\sum x_2)^2}{n_1} \]
\[ = \frac{444 - (66)^2}{10} \]
\[ = 444 - 4356 \]
\[ = 444 - 435.6 \]
\[ = 8.4 \]

After getting the result of each group data analysis, we can conclude in here that the result of t-test Formula is:

\[ t = \frac{x_1 - x_2}{\sqrt{\frac{SS_1 + SS_2}{n_1 + n_2 - 2} \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}} \]
\[
8.6 - 6.6
\]

\[
\sqrt{\left[ \frac{8.4 + 8.4}{10 + 10 - 2} \right] + \left[ \frac{1 + 1}{10 + 10} \right]}
\]

\[
= \sqrt{\frac{16.8}{18} + \frac{2}{10}}
\]

\[
= \sqrt{0.94 + 0.2}
\]

\[
= 2
\]

\[
\sqrt{1.14}
\]
To find the value of t-table of degrees of freedom (df), we can use the formula below:

\[
\text{df} = n_1 + n_2 - 2
\]

\[
= 10 + 10 - 2
\]

\[
= 20 - 2
\]

\[
= 18
\]

To find the value of table t – of degrees of freedom (df) for 18:

The closest minimum score of degrees of freedom (df) for 18 is 17 with table-t = 1.740

The closest maximum score of degrees of freedom (df) for 18 is 19 with table-t = 1.729

The difference of the two df is 19 - 17 = 2

The difference score of table-t is \(0.011 \times (19 - 18)\) difference of observed df and table df

\[
0.011 \times 1 = 0.0055
\]

Thus, table-t of df for 18 is 1.729 – 0.0055 = 1.7235

Observed t is higher than table-t (1.874 > 1.7235)
4.5 Interpretations

\[ \alpha = 0.05 \]

Table-\( t = 1.7235 \)

Observed \( t = 1.874 \)

Observed \( t > \) table \( t \)

\[ 1.874 > 1.7235 \]

From the result of the analysis, the writer concludes that:

1. Null Hypotheses (\( H_0 = \bar{x}_1 = \bar{x}_2 \)) which states that there is no significance difference between teaching of vocabulary using quantum learning and natural approach is rejected.

2. Experimental Hypotheses (\( H_e = \bar{x}_1 > \bar{x}_2 \)) which states that teaching of vocabulary using quantum learning is more effective than using natural approach is accepted.

8. Conclusion

1. The teacher found out that similarities and differences between natural approach and quantum learning method are:

   The similarities between natural approach and quantum learning in teaching English vocabulary on the writer’s point of view are:

   1. Teaching English regardless the presence of grammar form, wherein these both methods are only focusing on the meaning.
Encourage the students to speak into the target language in the class activities.

The differences between natural approach and quantum learning in teaching English vocabulary on the writer’s point of view are:

1. In the quantum learning method, the teacher creates an enjoyable learning throughout the learning process by the games, pictures, story telling, etc. Though, natural approach is also applying such of those criterion, nevertheless, quantum learning has more potential method to attract the student’s curiosity in learning English vocabulary. On the writer’s point of view, natural approach emphasizes more on the effectiveness of communicative language throughout the class activities by using target language.

2. In the class activities, the writer found out that teaching English vocabulary using quantum learning has more appreciation from the students rather than using natural approach. It is because; in quantum learning the method to attract the student’s curiosity is using a lot of interactive games in its learning process than in natural approach.

2. To teach English vocabulary using quantum learning, the teacher starts the lesson by giving them a direct example or giving them a demonstration of how to do it, and also giving them an attractive game. The vocabulary is about adjective and focuses on the human personalities. On the other hand, in teaching English vocabulary using natural approach, the teacher starts the lesson by giving them an
attractive learning process in order to create an effective two way communication between the teacher and the students. The vocabulary is also about adjective and focuses on the human personalities.

3. In teaching English vocabulary using quantum learning, the teacher has several problems, such as:
   1. Sometimes, some of them are replying in native language before struggling using the target language.
   2. The students could not answer the questions given by the teacher.

In teaching English vocabulary using natural approach, the teacher has several problems, such as:
   1. The teacher has lack of appreciation from the students in the language learning process.
   2. Most of them are passive students.

4. The solutions used by the teacher in teaching English vocabulary when using quantum learning are:
   1. The teacher should speak English very slowly and some of other time should use a gesture to help them understand better about what the teacher is going to say.
   2. The teacher should give a direct example when he or she is asking questions to the students or even giving a demonstration of how to do it.
The solutions used by the teacher in teaching English vocabulary when using natural approach are:

1. To overcome this problem, sometimes the teacher should provide more attractive teaching performance in order to avoid them from a boring situation.

2. This is a common situation where there are passive students in class. The key answer of this problem is simple, when the teacher for the first time come into the class, the teacher should find the most active student in class. The point in here is, when the teacher start a question part, the teacher may use this active student as a role model to attract the other students’ courage to be more active in the class activities.

5. The writer also found that the comparison of students’ achievement between using quantum learning and using natural approach can be described as follows;

Students in experimental group (quantum learning)

The average score ($\bar{x}_1$) is 8.6

The sum squared deviation ($\sum x_1$) is 86

The total number of students: 10

Meanwhile the test result of control group (natural approach) can be seen as follows:

The average score ($\bar{x}_2$) is 6.6

The sum squared deviation ($\sum x_2$) is 66

The total number of students: 10
It means that between the two groups, experimental group and control group, experimental group which implemented quantum learning get higher achievement than control group which implemented natural approach.