CHAPTER III
METHOD OF INVESTIGATION

A. Research Design

This is a descriptive quantitative study that is focused on describing field phenomenon about students' awareness of using appropriate punctuation marks in dialogue text. There are two kinds of data in this study those are quantitative and qualitative data.

A quantitative data dealt with numerical data.[1] In this study, results of the actual test as quantitative data was used to find out students' errors types and categories on punctuating unmarked dialogue text and to know general tendencies of the students' awareness of using punctuation marks in dialogue text.

Meanwhile, a qualitative data dealt with words or symbol. An analysis of qualitative data can be used to strengthen description of a quantitative data.[2] In this study, The results of interview to the students and the teacher as a qualitative data was used to find out factors which cause students' errors of using punctuation marks and explain possible solution to overcome such problems. The data are analyzed by using statistical analysis and interpretation.

B. Place and Time of Research

The research was conducted in MTs Darul Ulum Semarang and at the end of odd and the first time of even semester in the academic year of 2009/2010. The research was conducted for one and a half month or seven weeks, started from December 01, 2009 until January 16, 2010. In the first week, the researcher asked permission to the head master of related school and did observation in order to adjust with the atmosphere of the intended school, teachers and the students. The second week, exactly on December 07-

[1]Suharsimi Arikunto, *Prosedur Penelitian: Suatu Pendekatan Praktek,* (Jakarta: PT. Rineka Cipta, 2006), 2nd Ed., p. 239.

[2]*Ibid.*

08, 2009, the try-out test was conducted. In the third and fourth week, the research was postponed due to mid-term test of related school. The actual test to find out students awareness of using punctuation marks in dialogue text was conducted in the fifth week, exactly, on December 28-29, 2009. Interview with the students and teacher to strengthen the researcher's analysis had been conducted in the next week on January 04-05 and 12, 2010**.**

C. Population

Population can be defined as the whole of the study.[3] In this case the population of the research is the eighth grade students of MTs Darul Ulum Semarang in the academic year of 2009/2010. The total of population is 56 students. Arikunto explained that "when the number of subjects is less than one hundred, they all should be taken as the subject of the research."[4] So, this research can be said as a total population research.

D. The Technique of Data Collection

1. Test

Test is sequence of questions or exercise that is used to measure achievement, personality, intelligence, attitude and talent of a person or a group of people.[5] In this research, the test was conducted to find out students' errors types and categories on applying punctuation marks and to know general tendencies of students' awareness of using punctuation marks in dialogue text, especially when they were punctuating unmarked dialogue text.

There were 78 questions that were being tested; all of them about punctuation marks. The type of test was completion item test and designed for eighth grade students of MTs Darul Ulum Semarang. Student must complete the unmarked dialogue text which was given to them by punctuating it correctly (The form of the material tested was enclosed).

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[3]*Ibid.*, p. 130.
[4]*Ibid.*, p. 134.
[5]*Ibid.*, p. 150.

2. Interview

Interview is a conversation that is conducted by interviewer to gain information from interviewee.[6] In this research, an interview to the students was conducted to know students' views on the use of punctuation marks and to find out the factor which caused some errors of students' punctuations. An interview to the teacher to know his view on the importance of teaching punctuation marks during junior high school and to explain possible solution to overcome such problems which was faced by students was conducted as well to support this thesis.

The type of interview that was applied was *semi-structured* interview. This kind of interview was applied to the students and the teacher of eighth grade of MTs Darul Ulum Semarang in the academic year of 2009/2010 to gain extra information from the object of the research. The material of the interview was mainly about the importance of teaching punctuation marks in junior high school, the errors of applying punctuation marks in dialogue text, factors that cause those errors and possible solution to overcome such problems (For detail see appendix).

E. Instruments of The Research

1. Test

The test was conducted twice. The first was try-out test and the second was actual test. The try-out test was conducted to measure the validity, reliability, degree of difficulty and discriminating power of the test that would be used as an instrument of the research. There were 100 items that were tested in try-out test. After finding that the test was valid and reliable, the researcher conducted actual test. The result analysis of try-out test as follow:

a. Validity of the Test

It is a measurement which shows the validity of the instruments. In this study, the validity of the test was calculated by using the *product-moment* formula:

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[6]*Ibid.*, p. 155.

$$r_{XY} = \frac{N\Sigma xy - (\Sigma x)(\Sigma y)}{\sqrt{\{N\Sigma x^2 - (\Sigma x)^2\}\{N\Sigma y^2 - (\Sigma y)^2\}}}$$

In which,

r_{XY} : Coefficient of correlation between x and y variable or validity of each item.

N : The number of students / subject participating in the test/ testee.

Σ_X : The sum of item's score.

Σ_Y : The sum of the testees's score.

Σ_{Y^2} : The sum of square of the testees's score.

Σ_{X^2} : The sum of square score of the items's score.

Σ_{XY} : The sum of the product of multiplying the item's score and the total score of each testee.[7]

By using the formula above, for the item number 1, it was found that r_{XY} was 0.7253 (see Appendix). After being consulted to the r *product-moment* table for N=56 with significance level a=5%, r table was 0.266. The result showed that r_{XY} was bigger than r table. So, the item number 1 was valid.

The same procedure was applied to other test items and it was found that 78 items were valid and 22 items were invalid. The invalid items were not included in the actual test. The following table is the valid and invalid items of the test:

Table 1
Validity and Invalidity of Items

No.	Criteria	Item Number
1.	**Valid**	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26,

[7]*Ibid.*, p. 170.

		27, 28, 29, 31, 32, 33, 35, 36, 37, 39, 40, 42, 44, 45, 46, 47, 48, 49, 50, 52, 53, 55, 56, 57, 58, 61, 62, 63, 65, 67, 68, 69, 70, 71, 73, 74, 76, 77, 78, 79, 80, 84, 85, 87, 88, 90, 91, 92, 93, 94, 95, 96, 99, 100.
2.	**Invalid**	8, 25, 30, 34, 38, 41, 43, 51, 54, 59, 60, 64, 66, 72, 75, 81, 82, 83, 86, 89, 97, 98.

b. Reliability of the Test

It means can be believed. Beside validity, a good test should have reliability as well. Reliability is necessary characteristic of any good test. The method to find out reliability involved scoring of first and last part of the items separately by making table. To get the coefficient of correlation, the researcher applied the *product-moment* formula and then continued to the *spearman-brown* formula. The formula of product moment as follow:

$$r_{XY} = \frac{N\Sigma xy - (\Sigma x)(\Sigma y)}{\sqrt{\left\{N\Sigma x^2 - (\Sigma x)^2\right\}\left\{N\Sigma y^2 - (\Sigma y)^2\right\}}}$$

In which,

r_{XY} : Coefficient of correlation between the scores of the first and last part of the items.

N : The number of students / subject participating in the test/ testee.

Σ_X : The score of first part.

Σ_Y : The score of last part.[8]

After finding r_{XY} the computation is continued to the *spearman-brown* formula as follow:

[8]*Ibid.*, p. 181.

$$r_{11} = \frac{2 \times r_{xy}}{1 + r_{xy}}$$

In which,

r_{11} : The reliability of the instrument.

r_{xy} : Coefficient of the correlation between the first and last part. [9]

By using the formula above, the researcher found out that r_{11} was 0.94764 (see Appendix). After being consulted to the r *product-moment* table for N=56 with significance level a=5%, r table was 0.266. The result showed that r_{XY} was bigger than r table. So, the item could be considered to be reliable.

c. Degree of Test Difficulty

After try out was conducted, each item was classified in the difficulty level by using this formula:

$$FV = \frac{R}{N}$$

In which,

FV : The index of difficulty.

R : Number of students who answered the item correctly.

N : Number of students.[10]

Or:

$$FV = \frac{Correct\ U + Correct\ L}{2n}$$

In which,

D : The discrimination index

U : The number of the students in the upper group who answered item correctly

[9] *Ibid.*, p.180.

[10] J. B. Heaton, *Writing English Language Test*, (London: Longman Group Limited, 1976), p. 172.

L : The number of the students in the lower group who answered item correctly

n : The number of the students in one group. [11]

The level of difficulty of each item was determined by using this following categorization:

FV ≤ 0.00 : very difficult.

0.01 - 0.30 : difficult.

0.31 - 0.70 : medium.

0.71 - 1.0 : easy.

FV ≥ 1.0 : very easy.[12]

This is the analysis of difficulty level for item number 1:

R = 46

N = 56

So,

$$FV = \frac{R}{N}$$

$$FV = \frac{46}{56}$$

FV = 0.8214

The obtained result is FV= 0.8214 and after being consulted to the categorization of the level of test difficulty, it is found that the result is on the 0.71-1.0 (see appendix). Thus, the items number one is on the easy level. Here the following results of analyzing degree of test difficulty:

Table 2
Degree of Test Difficulty

No.	Criteria	Item Number
1.	**Very Difficult**	None

[11]*Ibid.*, p. 176.

[12]Suharsimi Arikunto, *Dasar-Dasar Evaluasi Pendidikan, Revised Ed.,* (Jakarta: Bumi Aksara, 2002), 3rd Ed., p. 207.

2.	**Difficult**	30, 43, 97.
3.	**Medium**	8, 9, 19, 24, 26, 32, 29, 40, 45, 47, 49, 50, 52, 56, 58, 62, 64, 68, 69, 70, 71, 75, 79, 84, 85, 87, 91, 92, 93, 99.
4.	**Easy**	1, 2, 3, 4, 5, 6, 7, 10, 11, 12, 13, 14, 16, 17, 18, 20, 21, 22, 23, 25, 27, 28, 29, 31, 33, 34, 35, 36, 37, 38, 40, 41, 42, 44, 46, 48, 51, 53, 54, 55, 57, 59, 60, 61, 63, 65, 66, 67, 72, 73, 74, 76, 77, 78, 80, 81, 82, 83, 86, 88, 89, 90, 94, 95, 96, 98, 100.
5.	**Very Easy**	None

d. Discriminating Power

The discriminating power measures how well the test items arranged to identify the differences in the students' competence. The formula is:

$$D = \frac{Correct\ U - Correct\ L}{n}$$

In which,

D : The discrimination index.

U : The number of the students in the upper group who answered item correctly.

L : The number of the students in the lower group who answered item correctly.

n : The number of the students in one group. [13]

The criteria of discriminating power as follow:

$D \leq 0.00$: Very Poor.

0.01 - 0.20 : Poor.

[13]J.B. Heaton, *op.cit.*, p. 174.

0.21 - 0.40 : Medium.

0.41 - 0.70 : Good.

0.71 - 1.00 : Excellent.[14]

This is the analysis of discriminating power for item number 1:

U = 27

L = 19

n = 28

So,

$$D = \frac{Correct\ U - Correct\ L}{n}$$

$$D = \frac{27 - 19}{28}$$

$$D = \frac{8}{28}$$

D = 0.2857

The obtained result states that D = 0.2857 and after being consulted to the discriminating power category, it is found that the result is on the 0.21-0.40. Thus, the items number one is on the medium level. Here the results of the discrimination index of the items of the test:

Table 3
The Discrimination Index

No.	Criteria	Item Number
1.	**Very Poor**	30, 38, 59, 66, 83, 86, 98.
2.	**Poor**	2, 3, 4, 5, 6, 7, 8, 10, 11, 13, 14, 16, 17, 18, 22, 25, 27, 28, 29, 31, 34, 36, 37, 40, 41, 42, 43, 44, 46, 48, 51, 53, 54, 55, 57, 60, 61, 62, 64, 67, 72, 73, 74, 77, 78, 81, 82, 89, 90, 94, 95, 96, 97.
3.	**Medium**	1, 12, 15, 19, 20, 21, 23, 32, 33, 35, 52, 58,

[14]Suharsimi Arikunto, *op.cit.*, p. 211.

		63, 65, 71, 75, 76, 79, 80, 87, 88, 93, 100.
4.	**Good**	9, 24, 26, 39, 45, 47, 49, 50, 56, 68, 69, 70, 84, 89, 92, 99.
5.	**Excellent**	91.

2. Interview Guideline

In this research, the type of interview that was applied was *semi-structured* interview. This kind of interview was intended to the students and the teacher of eighth grade of MTs Darul Ulum Semarang in the academic year of 2009/2010 to gain extra information from the object of the research. The material of the interview guideline as follow:

a. Students' and teachers view on the important of punctuation marks (for teacher and students).
b. Errors of applying punctuation marks in dialogue text (for students).
c. Factors that cause errors of applying punctuation marks in dialogue text (for students).
d. Possible solutions to overcome problems in applying punctuation marks in dialogue text.(for teacher). For the detail see appendix.

F. Technique of Data Analysis

1. Statistical Analysis

A statistical analysis was applied to analyze quantitative data of this study. The result of the test as quantitative data was analyzed to find out the dominant errors which were produced by students on punctuating dialogue text. The errors was classified into fourteen categories from punctuation marks it selves those are: full stop, question mark, comma, exclamation mark, quotation mark, colon, semi colon, dash, hyphen, slash, omission mark, parenthesis, apostrophe and capital letter. Here the application list of punctuation marks that was applied in test:

Table 4
The Application List of Punctuation Marks in Test

No.	Types of Punctuation Marks	Item Number
1.	**Full Stop (.)**	9, 15, 23, 33, 41, 44, 45, 48, 50, 58, 62, 67, 68, 73, 78.
2.	**Question Mark (?)**	5, 11, 18, 29, 37, 69.
3.	**Comma (,)**	4, 55, 66, 72.
4.	**Exclamation Mark (!)**	27, 68, 76.
5.	**Quotation Mark (‘ ’ or “ ”)**	None
6.	**Colon (:)**	2, 7, 13, 17, 20, 25, 31, 35, 53, 60, 64, 75.
7.	**Semi Colon (;)**	None
8.	**Dash (—)**	None
9.	**Hyphen (-)**	None
10.	**Stroke/Slash (/)**	None
11.	**Omission Mark (…)**	None
12.	**Parenthesis {( ) 0r [ ] }**	None
13.	**Apostrophe (’)**	22, 39, 43, 56, 57.
14.	**Capital Letter**	1, 3, 6, 8, 10, 12, 14, 16, 19, 21, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 46, 47, 49, 51, 52, 54, 59, 61, 63, 65, 70, 71, 74, 77.

To find the percentage of error from each category, this is the following formula that was used:

$$X = \frac{n}{N} x100\%$$

In which,

X : the percentage of error of each category.

n :the number of error of each item.

N : the total number of errors.

The result of the test was also used to analyze typical of errors, the error was divided into four categories those are: over generalizations, ignorance of rule restriction, incomplete application and false concept hypothesized. The formula that was used as follow:

$$X = \frac{n}{N} x100\%$$

In which,

X : the percentage of error of each type.

n : the number of error of each item.

N : the total number of errors.

The result of test also applied to know students' awareness in punctuating dialogue text or to find out the general tendencies of the students' awareness, the formula that was applied as follow:

$$Mxt = \frac{\sum x}{S\max} \text{ x } 100\%$$

Where:

Mxt : the mean of total score.

Σxt : the sum of the scores.

$S\max$: Maximum scores.[15]

After finding the mean, the data will be matched into the criteria of the tendency as follow:

Table 5
Level of Students' Awareness

No.	The Percentages of Students' Correct Answers	Level of Awareness
1.	85%-100%	Excellent
2.	75%-84%	Good
3.	60%-74%	Fair
4.	40%-59%	Poor
5.	0%-39%	Very Poor [16]

[15] Sutrisno Hadi, *Statistik* , Vol. 1, (Yogyakarta: Penerbit Andi, 2004), p. 41.
[16]Suharsimi Arikunto, *op.cit.*, p. 245.

2. Interpretation

Interpretation was used to interpret the result of statistical analysis of this study. It was used to explain students' categories and types of errors of applying punctuation marks in unmarked dialogue text. The result of interview as qualitative data was also interpreted to support this study in explaining students' awareness of using punctuation marks in dialogue text. Although level of awareness can not be measured exactly by using numerical data but the result of this study may give contribution toward the importance of being aware of using appropriate punctuation marks in writing especially in dialogue text.