

## CHAPTER III

### RESEARCH METHODOLOGY

This part presents the research methodology used in this study. The existence of the research methodology has a good of guiding the research in order to work systematically. The research methodology covers as set of research conclude by researcher. It involves research design, population and sample, data collection instrument, technique of data collection, technique of data analysis.

#### A. Research design

Research is simply the process of arriving as dependable solution to a problem through the planned and systematic collection, analysis and interpretation of data. Research design is a mapping strategy. It is essentially a statement of the object of the inquiry and the strategies for collecting the evidences, analyzing the evidences and reporting the finding.<sup>1</sup>

This research is comparative approach. According to suharsimi arikunto, comparative research is the research that to find similarity and different about things, procedure, jobs, critical, to the people or group toward ideas or procedure of the system. And also compare people similarities views, group or country towards case, people incidents toward idea.<sup>2</sup> This research tries to find the significant difference between English classroom environment in formal school and non formal school.

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<sup>1</sup>Yogesh Kumar Signh, *Fundamental Of Research Methodology And Statistics*, (New Delhi: New Age International, 2006), 77.

<sup>2</sup> Suharsimi Arikunto, *Prosedur penelitian*, (Yogyakarta : PT Rineka Cipta, 2002), 236.

The treatment is used in this research is independent variable and dependent variables. Where, independent variable (variable X) is English classroom environment in formal school, and dependent variable (variable Y) is English classroom environment in non formal school.

In comparative study, two groups which are similarity that are chosen to be compared. The researcher wants to know whether there is significance different of two groups which are compared.<sup>3</sup>

Based on research design above, the researcher chooses two English classroom environment, to know how the condition classroom environment in Formal school and Non Formal school in teaching and learning, the researcher will compare the result of student respondent in Formal School and Non Formal School about environment at BBM Juara and SMPN 2 Jetis.

The researcher used two group students at BBM Juara and SMPN 2 jetis. The subjects of this research was student in ninth grades which consist of 80 students. The researcher gives questioners to students at BBM Juara and SMPN 2 jetis.

## **B. Population and Sample**

### **1. Population**

According to Arikunto, "populasi adalah keseluruhan subjek *penelitian*".<sup>4</sup>

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<sup>3</sup>Suharsimi Arikunto, prosedur penelitian, (Yogyakarta : Melton Putra, 1996) p.27.

So population is all of research subject, the researcher can be gained the data.

The population on this research is all students at SMPN 2 Jetis which consist of 259 students and all students at BBM Juara which consist of 133 students, so the total population is 392 students.

## 2. Sample

Arikunto stated that, "*sample adalah sebagian atau wakil populasi yang diteliti*".<sup>5</sup> The sample is taken by applying a sapling technique. Sampling technique is a procedure of taking part of population will be used as the sample. In a scientific research, sample is used to represent population because it is impossible for the researcher to collect data by taking all element of population.

Because population is very great, so the writer takes 80 students from the number of population. To determine of sample measurement it is supported by statement of Nana Syaodih Sukmadiana, that "the sample of correlation research are 30 peoples, so quite large. While the casual comparative and experimental research of 15 peoples for each group is enough to be compared, and research survey the sample of 100 for all of

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<sup>4</sup>Ibid, 108.

<sup>5</sup> Ibid, 109.

new samples is enough. While for groups sample ranged from 20 to 50 peoples”.<sup>6</sup>

The technique of taking sample in this study is cluster sampling, because the sample is not based on individual but on a group of the students in SMPN 2 Jetis and BBM Juara. Total of the sample is 80 students which are divided in two groups. The number in SMPN 2 Jetis is 40 students and Juara is 40 students.

### C. Instrument of data Collection

Table 3.1

The indicator of questionnaire

Title	Variable	Indicator	Techniques of data collection	No item of instrument
	The Classroom English Environment at Formal school (SMPN 2 Jetis) (Variable X)	1. Controlling environment 2. Safety 3. Comfortable 4. Traction power	Questioner	1, 11, 12, 19 2, 6, 3, 9, 8, 5, 15 7, 13,
	The Classroom English Environment at Non formal School (BBM Juara) (variable Y)	5. Improve responsibility and care 6. Setting and acoustic sound.		4, 10, 17,14, 18 16

<sup>6</sup> Nana Syaodih Sukmadinata, PT Metode Penelitian, (Bandung : Remaja Posdakarya,2009), 260.

## 1. Test of Validity

In the quantitative research the instrument of data collection of the research instrument is agreed with the instrument validity and reliability. Validity means the extent to which inferences made from assessment result are appropriate, meaningful, and useful in terms of the purpose of the assessment.<sup>7</sup> Test is said to have validity if the result are in accordance with the criterion, in term of parallels between the results of test with the criterion.

A test is valid if the test exactly can measure what we will be measured.<sup>8</sup> Validity always refers to the degree to which that evidence support the inferences that are made from the scores. Validity must consider to the test's content and method, how test takers perform. Determine the internal validity of an instrument can use formula Karl Pearson product moment. The calculation result can be seen in

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}}$$

Information:

$r_{xy}$  = coefficient correlation between variable x and y

N = total Respondent

<sup>7</sup> H. Douglas Brown, Language Assessment Principle and Classroom Practice, (New York : Longman, 2000), 22.

<sup>8</sup> Sugiyono, Metode Penelitian Pendidikan: pendekatan kuantitatif, kualitatif dan R &D, (Bandung :Alfabeta,2006), 59.

$\Sigma xy$  = total product moment

$\Sigma x$  = score item total

$\Sigma y$  = score total

$(\Sigma x)^2$  = quadrate score item total

$(\Sigma y)^2$  = quadrate score total

It is very important to test the validity of our instrument before we hold the research. If the instrument is valid, the data that will be gained also become accurate and valid. We can measure the validity of instrument using karl Pearson product moment as the formula above. In this research uses degree significance 5 % , correlation is positive when  $r_{xy} \geq 0.36$ , so the item is valid, And if  $r_{xy} \leq 0.36$  so the item is in valid. The table below shown the recapitulation test item validity of the research .

Table 3.2

Recapitulation Test Item Validity

No. Item	"r" arithmetic	"r" table	Explanation
1	0.48445	0.36	Valid
2	0.48129	0.36	Valid
3	0.77928	0.36	Valid
4	0.73136	0.36	Valid

5	0.78288	0.36	Valid
6	-0.15759	0.36	Invalid
7	0.32028	0.36	Invalid
8	0.74148	0.36	Valid
9	0.69658	0.36	Valid
10	0.53570	0.36	Valid
11	0.21211	0.36	Invalid
12	0.35914	0.36	Invalid
13	0.65071	0.36	Valid
14	0.51386	0.36	Valid
15	0.68153	0.36	Valid
16	0.75095	0.36	Valid
17	0.23128	0.36	Invalid
18	0.45891	0.36	Valid
19	0.76642	0.36	Valid
20	0.71065	0.36	Valid
21	0.16089	0.36	Invalid
22	0.55205	0.36	Valid
23	0.67164	0.36	Valid
24	0.69638	0.36	Valid
25	0.49969	0.36	Valid

From the table above, there are six items that are invalid ( 6,7,11,12,17, and 21) and the other items are valid. So the researcher takes 19 items to measure the condition the classroom environment.

## 2. Test of reliability

Reliability means dependability. It means that the numerical results produced by an indicator do not vary because of characteristics of the measurement process or measurement instrument itself. Test reliability is defined as the extent to which the result can be considered, consist, or stable.<sup>9</sup> the reliability in this research is measured through two kinds of method, the first method with the split half method, the test is divided into halves based on the odd-even item. By applying this method, it is rescored, yielding two scores-one for each half –for each test taker.<sup>10</sup> Then compute the correlation between the two sets of scores, the steps to measure the reliability are:

1. Make the table of item analysis of all items. (appendix)
2. Make the table of odd-even split.
3. Apply the data to the formula of product moment correlation.

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}}$$

<sup>9</sup> Brown, james Dean, Testing In Language Programs “ *A Comprehensive Guide To English Language Assessment*.(New York: Mc Graw Hill, 2003), 10.

<sup>10</sup> Lyle F. Bachman, *fundamental Consideration in Language*, (New York : Oxford University Press, 1997), 174.

4. Apply the result to the Spearman-Brown formula

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

5. Consult the correlation result ( $r_i$ ) to the “r” table of product moment after find out the degrees of freedom (df). The formula is:

$$df = N - nr$$

df = degrees of freedom

N = number of cases

nr = number of variables

if the correlation is positive when  $r_{xy} > r_t$ , so the instrument is reliable.

And if  $r_{xy} < r_t$  so the instrument is not reliable. From the each instrument in this research, the number of item is  $N = 30$ , so  $df = (30 - 2) = 28$ . In the significant standard 5 % is gotten  $r_t 0.377$  and 1 % is gotten  $r_t 0.496$ . the result of students answers  $r_i$  is 0.9367. it can be conclude that  $r_i > r_t$  ( $0.9367 > 0.377$  and  $0.9367 > 0.496$ ). so the research instrument are reliable.

#### **D. Technique of data Collection**

In this research, researcher collects quantitative data. The researcher uses questioner.

Questionnaire is a test that consists of some questions to know about the object. The questionnaire is a technique of data collection by giving a set

of question or a written statement to be answered by the respondents. Basically the questionnaire is effective to know the certain variable that are measured and what the respondent expects. In addition, the questionnaire is appropriate to use in large number respondent in many location. Questionnaire has two types: closed form and open form. Closed form questionnaire contain of question and alternative answers. The answers provide for each question should be exhaustive of all possible responses.

In this research questionnaire is use to get data about classroom environment at SMPN 2 Jetis sample of Formal School and BBM Juara sample of non Formal School.

#### **E. Technique of Data Analysis**

According to retno widyaningrum, said that, “teknis analisis komparasional yaitu salah satu teknis analisis kuantitatif atau salah satu teknis satistic yang dapat digunakan untuk menguji menngeni ada tidaknya perbedaan antara variable yang diteliti”.<sup>11</sup>

Before testing hypothesis, the data must be normally distribute and homogenous, therefore, normality and homogenous must be provide.

##### **1. Normality**

This research used kolmogorov-smirnov to test normality. The steps and formula as follow:

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<sup>11</sup>Retno Widyaningrum, statistik pendidikan,(yogyakarta : Pustaka Felicha, 2013), 150.

- Step 1 : make hypothesis  
 Ho :distribution data are not normally  
 Ha : distribution data are normally
- Step 2: determining of  $M_x$  and  $SD_x$
- Step 3: determining score of fkb
- Step 4: determining of f/N
- Step 5: determining of fkb/N
- Step 6: determining Z with formula:  $Z = \frac{x-\mu}{\sigma}$
- Step 7: determining  $P < Z$
- Step 8: determining  $a_2$  (different score between fkb/N and  $P < Z$ )
- Step 9: determining  $a_1$  (different score between f/N and  $a_2$  )
- Step10 : testing hypothesis  
 Accepted Ho if  $a_1 \max < D_{table}$   
 Rejected Ha if  $a_1 \max > D_{table}$  <sup>12</sup>

Based on the calculation, the  $a_1 \max$  is 0.0714,  $a_1 \max < 0.1520$ , it means the data is normal.

## 2. Homogeneity

After the data normal, the researcher used Harley formula to test the homogeneity, the steps and formula as follows:

Step 1: make distribution table of frequency

Step 2 : determining the deviation standard each variable with formula :

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<sup>12</sup>Ibid, 206.

$$SD_x = \sqrt{\frac{\sum fx^2}{N_x} - \left(\frac{\sum fx}{N_x}\right)^2}$$

$$SD_y = \sqrt{\frac{\sum fy^2}{N_y} - \left(\frac{\sum fy}{N_y}\right)^2}$$

Step 3: using the Harley formula:

$$F_{(max)} = \frac{var\ max / SD_x^2}{var\ min / SD_y^2}$$

Step 4: compare  $F_{(max)}$  result with  $F_{(max)}$  table with

db = (n-1 ; k) = (40-1;2) = (39;2) at significance level 5 % is 2,40 and 1 % is 3,00. Based on the calculation the  $F_{(max)}$  hitung is 1,141.  $F_{(max)}$  hitung <  $F_{(max)}$  table , 1,141 < 2.40/3.00. it mean the data is homogeny.

After normality and homogeneity test, the researcher used test-t to analyze the data, the research uses two variables; one independent variable and one dependent variables:

a. Variables X

Variables X in this research is the score of questionnaire respond in formal School (SMPN 2 Jetis)

b. Variables Y

Variables Y in this research is the score of questionnaire respond in non formal school (BBM Juara)

The step of analysis data are as follow:

1. The formula of mean variable 1 and variable 2

$$M_x = M' + i \left( \frac{\sum fx}{N} \right)$$

$$M_y = M' + i \left( \frac{\sum fy}{N} \right)$$

2. Score of Standard deviation of variable X and variable Y

$$SD_x = i \sqrt{\frac{\sum fx^2}{N_1} - \left( \frac{\sum fx'}{N_1} \right)^2}$$

$$SD_y = i \sqrt{\frac{\sum fy^2}{N_2} - \left( \frac{\sum fy'}{N_2} \right)^2}$$

Standard error the mean of variable X and variable Y

$$SE_{M1} = \frac{SD_x}{\sqrt{N-1}}$$

$$SE_{M2} = \frac{SD_y}{\sqrt{N-1}}$$

3. Score Standard the mean of variable X and Y

$$SE_{M1-M2} = \sqrt{SE_{M1}^2 + SE_{M2}^2}$$

4. To find score  $t_o$

$$t_o = \frac{M_1 - M_2}{SE_{M1-M2}}$$

5. To test the significant

df (degree of freedom) =  $(N_1 + N_2 - 2)$ , if the result of “to” is higher than

“t”, standard the alternative hypothesis is accepted, but if it is lower,

null hypothesis is accepted.

## CHAPTER IV

### RESEARCH RESULT

#### A. General Description of Research Location

##### 1. Description of SMPN 2 Jetis

###### a. Brief History of SMPN 2 Jetis

The existing of SMPN 2 Jetis is was begun from the consciousness of local government of Ngasinan and also the society around Ngasinan village to obtain learning opportunities for school-age children of Ngasinan and surrounding village. Before the building of SMPN 2 Jetis was built and legalized from the regional Ministry of education and culture, the students of SPMN 2 jetis studied in the village' haouse. The government programs to establish new school immediately responded by the local government of Ponorogo regency and society, primarily the people in Ngasinan village by preparing the land or location of school construction and re quirement as deemed necessary.

Later, on November 22<sup>th</sup> 1986, SMPN 2 Jetis was bulid and legalized by the Regional Ministry of education and culture. Since it was built in SMPN 2 Jetis has been happed commutation of headmaster. They are :

1. Isran (1986-1993)
2. Suherman, B.A (1993-1999)
3. Hj. Siti Nurjannah, S.pd(1999-2006)

4. Drs. Wahyu Hermadi (2006-2007)
5. Mulyono, S.pd (2007-2010)
6. Drs. Dandun Santoso, M.pd (2010-now)

**b. The Geographical Location of SMPN 2 Jetis**

SMPN 2 Jetis is located at :

Street : Gajah Mada

Number : 13

Village : Ngasinan

Sub-district : Jetis

Province : East java

SMPN 2 Jetis takes along 19.440 M<sup>2</sup> that is located 1.5 km in the south of Jetis intersection. It is a strategic place that is in the public transportation line. This school has 12 classes, 2 language classes, 1 teacher office, 1 headmaster office, 1 administration office, 1 mosque, 1 library room, 1 Healthy room, 1 music room, 1 fisika and biology laboratories and computer laboratories.

Because of the teacher and students have good qualities, so, in 2011 SMPN 2 Jetis gets appreciation as Standard School National (SSN)

**c. The vision and mission and of SMPN 2 Jetis**

❖ The vision is:

Excellent in achievement based on Iman and Taqwa with principle value culture and national character.

❖ The mission are :

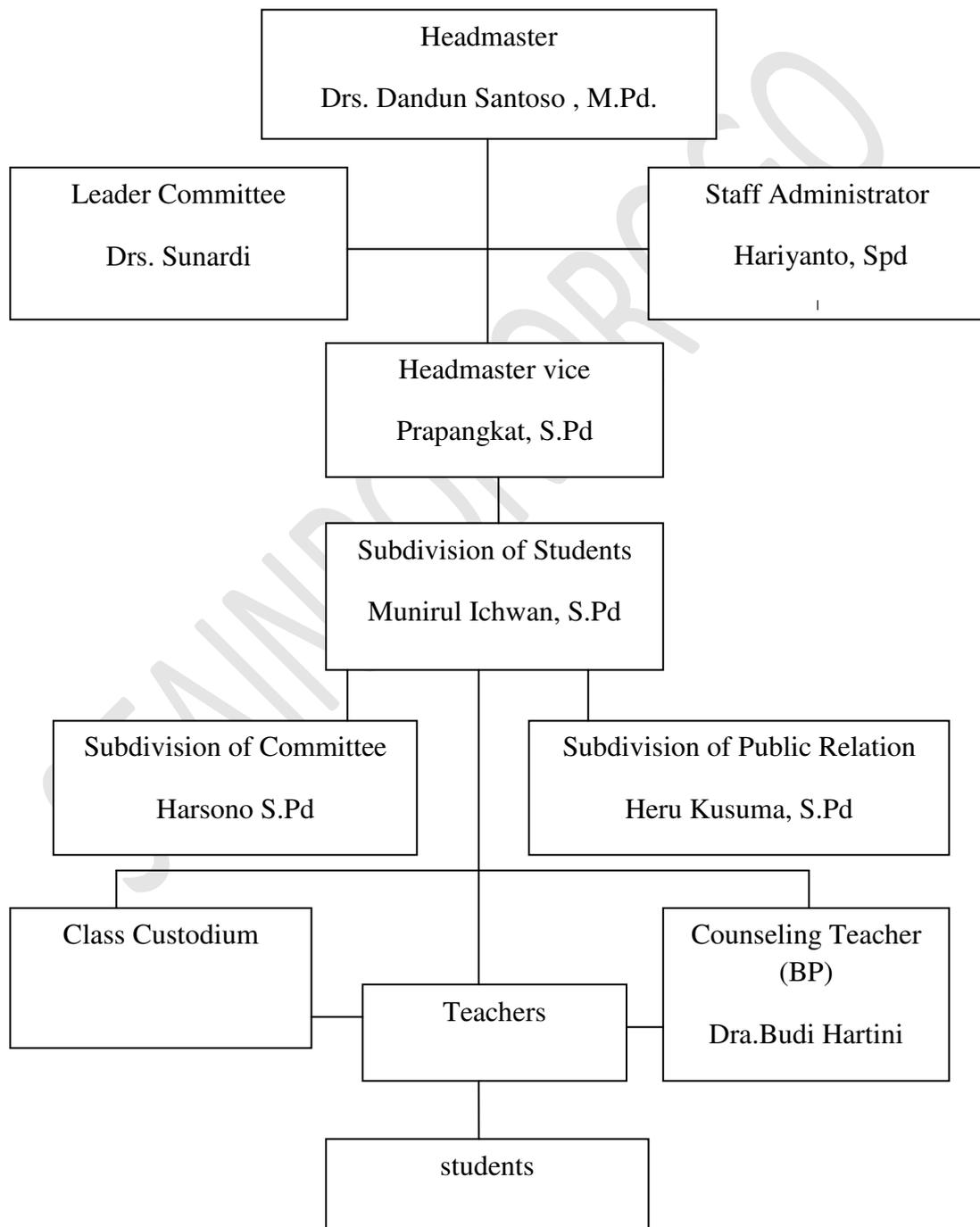
1. Develop the religion attitude in school and society.
2. Develop reading habit, tolerance, mutual assistance, discipline, honest, creative and be own master.
3. Create the school environment which comfortable, clean, beauty, neat and secure.
4. Create the situation challenge, enjoy, communicative, unafraid and democratize in learning.
5. Use the time, resource physic, and resource human in a maximal manner.
6. Growing the society carefully, loving earth, loving the country, and democratic life.

**d. The organization structure of SMPN 2 Jetis**

The organization structure of SMPN 2 Jetis is :

Table 4.1

Organization structure of SMPN 2 Jetis



## **2. Description of BBM Juara**

### **1. Research location of BBM Juara**

This location of Juara is:

Street : Jl. Batoro Katong

Number : 28

Sub-district : Ponorogo

Province : East Java

### **2. Vision and Mission of BBM Juara**

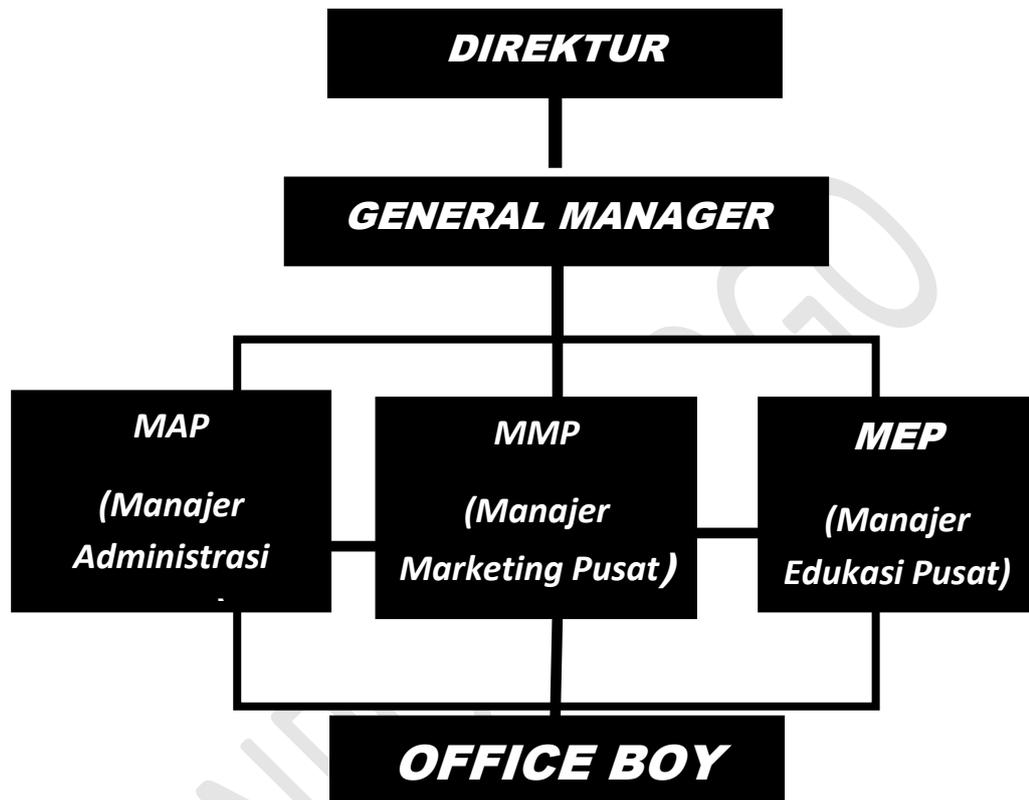
The Vision and Mission from is Mr. Umar Khairullah, SH, as the establisher which has aspiration be formed in long time. The mission of this company in general is:

1. Apply the spiritual value in every working.
2. Create the more creation, achievement, and development self with spirit.
3. Dig the intelligent and give benefit to students, parents and other people.
4. The peace to improve selves, make the organization and product personal which can be play along, so can improve the good financial.

### 3. The structure organization of BBM Juara

table 4.2

the structure organization of BBM Juara



## B. Data Description

to know differences on the classroom environment between formal school and non formal school. the researcher will present data about classroom environment at SMPN 2 Jetis (formal school) and BBM Juara (non formal school), both in nine grades in academic years 2014/2015.

### 1. The data of result respondent in formal school

Table 4.3

The data of respondent in formal school

No	Name	Score
1	Bisma	60
2	Azhrul	76
3	Reni	47
4	Neni	45
5	Jamila	52
6	Bagus	48
7	Didik	52
8	Kiswoyo	55
9	Syahrul	55
10	Difa	50
11	Aprilia	43
12	Arischa	39
13	Anisa	58

14	ibtida'u	51
15	Nika	64
16	Sely	48
17	Sinta	45
18	tri wahyuni	44
19	Eko	46
20	m. nur	46
21	Effendi	63
22	Danang	63
23	Ricky	63
24	Andik	63
25	Sulistio	60
26	Luqman	60
27	Rian	62
28	Rima	63
29	Novita	61
30	Sela	68
31	Rudian	75
32	Aulia	68
33	Tia	66
34	Eka	56
35	Anissa	79

36	Erlina	84
37	Septiana	65
38	Galih	68
39	Novia	71
40	Ferra	66

## 2. The data of result respondent in non formal school

Table 4.4

The data of respondent in non formal school

No	Name	Score
1	Dinar	51
2	Pipit	57
3	Anisa	69
4	Kurnia	68
5	Famita	70
6	Ilham	79
7	Fernanda	72
8	yugo. F	63
9	Syaiful	68
10	Kuncoro	80
11	Mya	76

12	Zhulfikar	75
13	Dian	54
14	Ikhwan	55
15	Alfia	77
16	Sheila	66
17	Risky	73
18	Talita	78
19	Okta	65
20	Resgerta	65
21	Yusron	63
22	Pratama	65
23	Vegga	61
24	Alilia	62
25	Adinda	61
26	Antika	59
27	Dinda	46
28	Iva	62
29	Putrid	73
30	Hayulia	61
31	Laila	73
32	Okta	54
33	Donni	58

34	Bella	46
35	Fitri	41
36	Wahidah	41
37	Waqorrozin	54
38	Aga	64
39	Siska	67
40	Cindy	68

### C. Data Analysis

In this chapter, the researcher has been describing the mean and deviation standard of formal and non formal school and comparative on classroom environment between formal school and non formal school at SMPN 2 Jetis and BBM Juara in academic years 2014/2015.

#### 1. The analysis of formal school

Obtaining the data of respondents in formal school consist of 40 respondents.

Table 4.5

The calculation of finding

The mean score of formal school

X	F	Fx	$x^2$	$fx^2$
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84	1	84	7056	7056
79	1	79	6241	6241
76	1	76	5776	5776
75	1	75	5625	5625
71	1	71	5041	5041
68	3	204	4624	13872
66	2	132	4356	8712
65	1	65	4225	4225
64	1	64	4096	4096
63	5	315	3969	19845
62	1	62	3844	3844
61	1	61	3721	3721
60	3	180	3600	10800
58	1	58	3364	3364
56	1	56	3136	3136
55	2	110	3025	6050
52	2	104	2704	5408
51	1	51	2601	2601
50	1	50	2500	2500
48	2	96	2304	4608
47	1	47	2209	2209
46	2	92	2116	4232

45	2	90	2025	4050
44	1	44	1936	1936
43	1	43	1849	1849
39	1	39	1521	1521
	40	2348	93464	142318

Calculate the average

$$M_x = \frac{\sum fx}{N}$$

$$= \frac{2348}{40}$$

$$= 58.7$$

Calculate the deviation standard:

$$SD_x = \sqrt{\frac{\sum fx^2}{N} - \left[\frac{\sum fx}{N}\right]^2}$$

$$= \sqrt{\frac{142318}{40} - \left[\frac{2348}{40}\right]^2}$$

$$= \sqrt{3557.95 - (58.7)^2}$$

$$= \sqrt{3557.95 - 3445.69}$$

$$= \sqrt{112.26}$$

$$= 10.595281968877$$

From the calculation above, it can know that  $M_x = 58.7$  and  $SD_x = 10.595281968877$ . to determines category of best, good and enough, the formula as follow:

$$M_x + 1. SD_x = \text{best category}$$

$$M_x - 1. SD_x = \text{good category}$$

$$M_x - 1. SD_x \text{ to } M_x + 1. SD_x = \text{enough category}$$

The formula could be explained early as the formula below:

$$\begin{aligned} M_x + 1. SD_x &= 58.7 + 1.(10.595281968877) \\ &= 69.295281968877 = 69 \end{aligned}$$

$$\begin{aligned} M_x - 1. SD_x &= 58.7 - 1.( 10.595281968877) \\ &= 48.10471803112 = 48 \end{aligned}$$

$$M_x - 1. SD_x \text{ to } M_x + 1. SD_x = 48-69$$

From the explanation above, it can be known 69 to up include best category, than score less than 48 can be categorize into enough, and score between (48-69) include good category, to know more obvious about the categorization of classroom environment in formal school can be seen in the following table:

Table 4.6

Score category of formal school

No	Score	Frequency	Category
1	More than 69	5	Best
2	48-69	25	Good
3	Less then 48	10	Enough
Total		40	

From the category above, researcher conclude that the student give best level are 5 persons, moderate level are 25 good, and enough level are 10 persons.

Table 4.7

The calculation of finding

The mean score of non formal school

X	F	fx	$x^2$	$fx^2$
80	1	80	6400	6400
79	1	79	6241	6241
78	1	78	6084	6084
77	1	77	5929	5929
76	1	76	5776	5776

75	1	75	5625	5625
73	3	219	5329	15987
72	1	72	5184	5184
70	1	70	4900	4900
69	1	69	4761	4761
68	3	204	4624	13872
67	1	67	4489	4489
66	1	66	4356	4356
65	3	195	4225	12675
64	1	64	4096	4096
63	2	126	3969	7938
62	2	124	3844	7688
61	3	183	3721	11163
59	1	59	3481	3481
58	1	58	3364	3364
57	1	57	3249	3249
55	1	55	3025	3025
54	3	162	2916	8748
51	1	51	2601	2601
46	2	92	2116	4232
41	2	82	1681	3362
	40	2540	111986	165226

Calculate the average :

$$\begin{aligned} M_x &= \frac{\sum fx}{N} \\ &= \frac{2540}{40} \\ &= 63.5 \end{aligned}$$

Calculate the deviation standard :

$$\begin{aligned} SD_x &= \sqrt{\frac{\sum fx^2}{N} - \left[\frac{\sum fx}{N}\right]^2} \\ &= \sqrt{\frac{165226}{40} - \left[\frac{2540}{40}\right]^2} \\ &= \sqrt{4130.65 - (63.5)^2} \\ &= \sqrt{4130.65 - 4032.25} \\ &= \sqrt{98.4} \\ &= 9.9196774141098 \end{aligned}$$

From the calculation above, it can be know that  $M_x = 63.5$  and  $SD_x = 9.9196774141098$ . to determine category of best, good and enough, the formula as follow :

$$M_x + 1. SD_x = \text{best category}$$

$$M_x - 1.SD_x = \text{good category}$$

$$M_x - 1.SD_x \text{ to } M_x + 1.SD_x = \text{enough category}$$

The formula could be explained early as the formula below:

$$M_x + 1.SD_x = 63.5 + 1.(9.9196774141098)$$

$$= 73.41967741411 = 73$$

$$M_x - 1.SD_x = 63.5 - 1.(9.9196774141098)$$

$$= 53.58032258589 = 53$$

$$M_x - 1.SD_x \text{ to } M_x + 1.SD_x = 53-73$$

From the explanation above, it can be known 73 to up include best category, than score less than 53 can be categorize into enough, the score between (53-73) include good category, to know more obvious about the categorization of classroom environment in formal school can be seen in the following table:

Table 4.8

Score Category of non formal School

No	Score	Frequency	Category
1	More than 73	9	Best
2	53-73	27	Good
3	Less then 53	5	Enough

Total	40	
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From the category above, researcher conclude that the student give best level are 9 persons, good level are 27 persons, and enough level are 5 persons.

## 2. Data Analysis of Significance Differences

### 2.1 Data Analysis of significance Differences Classroom Environment in Formal school

Table 4.9

The calculation of Classroom Environment in Formal School

interval X	F	x'	fx'	x' <sup>2</sup>	fx' <sup>2</sup>
81-85	1	4	4	16	16
76-80	2	3	6	9	18
71-75	2	2	4	4	8
66-70	5	1	5	1	5
61-65	9	0	0	0	0
51-60	10	-1	-10	1	10
46-50	6	-2	-12	4	24
41-45	4	-3	-12	9	36
36-40	1	-4	-4	16	16
	40		-19		133

- ❖ To find mean from variable x

$$\begin{aligned}
 M_x &= M + i \left[ \frac{\sum fx'}{N_x} \right]^2 \\
 &= 9 + 1 \left[ \frac{-19}{40} \right]^2 \\
 &= 10 (-0.475)^2 \\
 &= 10 (0.225625) \\
 &= 2.25625
 \end{aligned}$$

- ❖ To find deviation standard from variable x

$$\begin{aligned}
 SD_x &= i \sqrt{\frac{\sum fx^2}{N_x} - \left[ \frac{\sum fx'}{N_x} \right]^2} \\
 &= \sqrt{\frac{133}{40} - \left[ \frac{-19}{40} \right]^2} \\
 &= \sqrt{3.325 - (-0.475)^2} \\
 &= \sqrt{3.325 + 0.225625} \\
 &= \sqrt{3.550625} \\
 &= 1.8843102186211
 \end{aligned}$$

- ❖ To find standard error of mean from variable

$$\begin{aligned}
 SE_{M1} &= \frac{SD_x}{\sqrt{N_x - 1}} \\
 &= \frac{1.8843102186211}{\sqrt{40 - 1}} \\
 &= \frac{1.8843102186211}{\sqrt{39}}
 \end{aligned}$$

$$\frac{1.8843102186211}{6.2449979983984}$$

$$= 0.3017311165039$$

2.2. Data Analysis of Significance Differences Classroom Environment in  
Non Formal School

Table 4.10

The tabulation of Non Formal School

interval Y	f	y'	fy'	y' <sup>2</sup>	fy' <sup>2</sup>
76-80	5	3	15	9	45
71-75	5	2	10	4	20
66-70	7	1	7	1	7
61-65	11	0	0	0	0
51-60	8	-1	-8	1	8
46-50	2	-2	-4	4	8
41-45	2	-3	-6	9	18
	40		14		106

❖ To find mean from variable x

$$M_x = M' + i \left[ \frac{\sum f x'}{N_x} \right]^2$$

$$= 11 + 1 \left[ \frac{14}{40} \right]^2$$

$$= 12 (0.35)^2$$

$$= 12 (0.1225)$$

$$= 1.47$$

❖ To find deviation standard from variable x

$$\begin{aligned}
 SD_y &= \sqrt{\frac{\sum fy^2}{N_y} - \left[\frac{\sum fy'}{N_y}\right]^2} \\
 &= \sqrt{\frac{106}{40} - \left[\frac{14}{40}\right]^2} \\
 &= \sqrt{2.65 - (0.35)^2} \\
 &= \sqrt{2.65 - 0.1225} \\
 &= \sqrt{2.5275} \\
 &= 1.5898113095585
 \end{aligned}$$

❖ To find standard error of mean from variable

$$\begin{aligned}
 SE_{M_y} &= \frac{SD_y}{\sqrt{N_y - 1}} \\
 &= \frac{1.5898113095585}{\sqrt{40 - 1}} \\
 &= \frac{1.5898113095585}{\sqrt{39}} \\
 &= \frac{1.5898113095585}{6.2449979983984} \\
 &= 0.2545735498981
 \end{aligned}$$

To know whether there are many significance differences on classroom environment in formal school and Non Formal school in academic years 2014/2015. The researcher uses the formula:

- ❖ To find differentiation of standard error between mean from Variable x and y

$$\begin{aligned}
 SE_{M_x - M_y} &= \sqrt{SE_{M_x}^2 + SE_{M_y}^2} \\
 &= \sqrt{0.3017311165039^2 + 0.2545735498981^2} \\
 &= \sqrt{0.0910416666667 + 0.0648076923077} \\
 &= \sqrt{0.1558493589744} \\
 &= 0.394777606982
 \end{aligned}$$

- ❖ To find the score  $t_0$

$$\begin{aligned}
 t_0 &= \frac{M_x - M_y}{SE_{M_x - M_y}} \\
 &= \frac{2.25625 - 1.47}{0.394777606982} \\
 &= \frac{0.78625}{0.394777606982} \\
 &= 1.9916276559117 \\
 &= 1.991
 \end{aligned}$$

Interpretation

$$df = (N_1 + N_2) - 2$$

$$df = (40 + 40) - 2$$

$$= 78$$

On the significant level 5 % at  $db_{80}$ , the table is 1.99

On the significant level 1 % at  $db_{80}$ , the table is 2.64

The interpretation is:

1.  $H_a$  accepted; if  $t_0 > t_{table}$  , there is significant difference between variable x and variable y.
2.  $H_o$  accepted; if  $t_0 < t_{table}$  , there is not significant different between variable x and variable y.

It means that  $H_a$  is accepted and  $H_o$  is rejected.

#### **D. Discussion**

The formula hypothesis:

$H_a$  : there is significance different English Classroom Environment between Formal school and Non Formal School.

$H_o$  : there is not significance different English Classroom Environment between Formal school and Non Formal School.

Based on the analysis above, the researcher gets  $t_0 = 1.991$ , and from  $t_{table}$  with degree of freedom (df) = 78 with standard of significant 5 % we can takes 1.99 and in 1% is 2.64, so the criteria of hypothesis are:

$H_o$  received if  $t_0 < 1.99$

$H_a$  received if  $t_0 > 2.64$

So the researcher determined the criteria of hypothesis from the result of data analysis  $t_0 = 1.991$ . in this case  $H_0$  is accepted, because  $t_0$  is lower than  $t_{table}$ .

$t_0 = 1.991$  and  $t_{table} = 2.64$ . from this result, the researcher can state that  $H_0$  is accepted and  $H_a$  is rejected. It means that is no significant differences between Classroom environment in Formal School and Non Formal School.

STANPONOROGO

## CHAPTER V

### CLOSING

#### A. Conclusion

- 1) The English classroom environment in Formal School is good, because 25 respondents from 40 respondents give good criteria and the average score obtained is 58.7.
- 2) The English classroom environment in Non Formal School is good, because 27 respondents from 40 respondents give good criteria and the average score obtained is 63.5.
- 3) From the result of calculation data, the researcher get  $t_0 = 1.991$  with degree of freedom (df) = 78 with standard of significance 1% the researcher gets  $t_{table} = 2.64$ . it means from this result, the researcher can state that  $H_0$  is accepted and  $H_a$  is rejected. It mean  $t_0 < t_{table}$ , so  $H_0$  is accepted.

The writer takes conclusion that there is not significance different between the English classroom environment in Formal School and classroom environment in Non formal school.

## **B. Recommendations**

After getting the result of the study in this research, the writer would like to give suggestions, as follow:

### 1) For the Formal school

The formal school can explore their classroom environment in all aspects such as facilities, setting equipments, controlling class, and soon.

The formal school can create the comfortable classroom environment in English teaching.

### 2) For the Non Formal School

The Non Formal School can give the best classroom environment to their students so the students able to feel enjoy in their study.

The Non Formal can give others classroom environment to the students which can support their study in Formal School.