## CHAPTER IV

## RESEARCH FINDINGS AND DISCUSSION

This chapter presents the research finding and discussion. It provides the data found from the research. In addition, it discusses data description and presentation and the correlation between students participation and their examination score.

## A. Research Findings

There are two kinds of data source which was found ; the data from students' participation and students' examination score in PeerWise online learning. The data was in the form of a score, therefore it was included in interval data. After the data from students' participation and examination score score were found, it was used to calculate the correlation both of them.

## 1. The Level of Students' participation in PeerWise

The researcher classified the data of students’ participation from PeerWise based on their range of score. Here is the data classification of students' participation from the table presented in Appendix A , based on the PeerWise scale that has been arranged. Here is the result :

Table 4.1

Level of Students' Participation

| No. | Range of Score | Level | Frequency | Percentage |
| :---: | :---: | :---: | :---: | :---: |
| 1. | $0-35$ | Very Low | 7 | $0,067 \%$ |
| 2. | $35-70$ | Low | 8 | $0,076 \%$ |
| 3. | $71-100$ | Average | 20 | $0,19 \%$ |
| 4. | $101-135$ | High | 64 | $0,609 \%$ |
| 5. | $136-150$ | Very high | 6 | $0,057 \%$ |

It could be seen from the table that the score range 136-150 was very high level in students' participation, in which 6 students belong to this level. There were 64 students whose qualification between the score range 101-135. It means that 0,61 \% of the students had high participation level. Besides, there were 20 students have average qualification which was between the score range 71-100, in which there are $0,19 \%$ of the students or 20 students were included this level. Unfortunately, there was 15 students that has low and very low level of students participation whose score range between 35-70 and 35-0.

From the data above, we concluded that almost all of students have high participation that is most of them have positive relationship toward their
examination score. It means that if the students have high participation in PeerWise online learning, so their examination score also good. The change of students' participation level was positively followed by students' examination score. If the students' participation increased and their examination score increased too. To be remembered that students who have high level participation in PeerWise are not always have good score on other subject. It just has an impact in concerned variable, means both variables has influence one another.

On other hand, the students who has low level and very low level participation included only 15 students. We assumed that they has low participation in PeerWise. It means that student left included 90 students has average-high enthusiasm to participate in making question and answer question on PeerWise online learning.

## 2. The Level of Students Examination Score in PeerWise

Besides the level of students' participation which was found out, it was also carried out the secondary data from the examination score in the first semester which was collected to know the students' score in PeerWise online learning. Here was the data classification based on the data presented in the table of examination score of students (see Appendix A) in six semesters that has been arranged based on Likert scale.

Table 4.2
The Level of Students Examination Score in PeerWise

| No. | Range of Score | Level | Frequency | Percentage |
| :---: | :---: | :---: | :---: | :---: |
| 1. | $0-20$ | Very bad | - | $0 \%$ |
| 2. | $21-40$ | Bad | - | $0 \%$ |
| 3. | $41-60$ | Average | 16 | $0,15 \%$ |
| 4. | $61-80$ | Good | 65 | $0,62 \%$ |
| 5. | $81-100$ | Very good | 24 | $0,23 \%$ |

The table showed that there were 65 students or $0,62 \%$ of the students had "good" qualification , in which the score range was 61-80. $0,23 \%$ of the students were between the score range 81-100. It means that 24 students were included into "very good" qualification. Meanwhile, 16 students or $0,15 \%$ of the students were between the score range 41-60, means that they were included into "average" qualification. In another hand, there was no student neither in "bad" nor "very bad" qualification which was between the score range 21-40 and 0-20.

Based on the findings above, we concluded that the most of the students have good examination score. If they have good examination score, means that they have too high enthusiasm to participate in question authoring and question answering component in PeeWise online learning. Moreover, there were no students
who have scored in range $0-40$. Those are proof that most of the students are diligent and high motivated to get online learning through web-based application.

## 3. Normality Test

Before it is decided to use parametric statistic to calculate the correlation, it should be tested by the normality test. Therefore, it has been tested for the normality. The distribution of data is normal if sig (significance) is more than $0,05(>0,05)$ and the distribution of data is not normal is sig (significance) is less than $0,05(<0,05)$. The writer used Kolmogorov-Smirnov test because the sample is more than 50 students. Here is the result :

## Table 4.3

Test of Normality
One-Sample Kolmogorov-Smirnov Test

|  |  | Unstandardized <br> Residual |
| :--- | :--- | ---: |
| N | Mean | 106 |
| Normal Parameters | Std. | $0 \mathrm{E}-7$ |
|  | Deviation | 24,02563210 |
| Most Extreme | Absolute | , 126 |
| Differences | Positive | , 126 |


| Negative | ,- 071 |
| :--- | ---: |
| Kolmogorov-Smirnov Z | 1,300 |
| Asymp. Sig. (2-tailed) | , 068 |

a. Test distribution is Normal.
b. Calculated from data.

It could be seen from the table, based on the calculation of SPSS 16 by using a Kolmogorov-Smirnov test, the data distribution is normal since the value of sig. (significance) presented in the table is 1,3 . It means more than 0,05 .

## 4. The Correlation between Students' Participation and Their Examination

## Score

Data from the students' participation and their examination score was used to answer the last research question. It was used to analyze - whether there was correlation between students' participation and examination score in PeerWise online learning. Then, students participation data included accumulation score from questioning participation and answering participation in PeerWise online learning. While students' examination score data included final score that got from the students' final test using Pro Prof web-based application.

From the data obtained, it was calculated by using SPSS 16 to know whether there is correlation between students' participation and their examination score. The result of the calculation is as follows :

Table of 4.4
The Value of Correlation

## Correlations

|  |  | PeerWise <br> Participation | Examination <br> - Score |
| :---: | :---: | :---: | :---: |
|  | Pearson |  |  |
| PeerWise | Correlation | 1 | , |
| Participation | Sig. (2-tailed) |  | ,350 |
|  | N | 105 | 105 |
|  | Pearson |  |  |
|  | Correlation | ,092 | 1 |
| Examination - Score |  |  |  |
|  | Sig. (2-tailed) | ,350 |  |
|  | N | 105 | 105 |

The table above describes the correlation between students participation and their examination score as Pearson Correlation 0,092 and Sig.(2-tailed) $=0,35$. It means that the variables are positively associated (it can be seen from the coefficient correlation) but there is a week correlation between two variables. The r-observation was 0,092 that we could interpret in the simple way of interpretation that it was classified as very low correlation meaning although the correlation had positive
correlation but the correlation was in the very low level which had a very limited correlation.

## 5. The Computation of Correlation between Students' Participation and <br> Examination Score in PeerWise Online Learning

Besides calculating the correlation by using SPSS 16, it was also calculated manually using Pearson Product Moment formula. Here are the calculations: (See Appendix B)

Students' Participation $=\mathrm{X}$

Examination Score $=\mathrm{Y}$

From the computation of correlation between students' participation and examination score in PeerWise online learning, we conclude that total of students who have participation is 105 students $(\mathrm{N}=105)$, sum of students' participation ( $\Sigma \mathrm{X}$ ) $=10477$, sum of examination score $(\Sigma \mathrm{Y})=7696$, sum of product of X and Y scores for each students $(X Y)=771372$, the sum of square of students’ participation score $\sum x^{2}=1139407$, the sum of square of students' examination score on PeerWise $\sum y^{2}$ $=579088$

To find out the coefficient correlation, it is used the formula :

$$
\begin{aligned}
& r_{x y}=\frac{n \sum X Y-\left(\sum X\right)\left(\sum Y\right)}{\sqrt{\left\{n \sum X^{2}-\left(\sum X\right)^{2}\right\}\left\{n \sum Y^{2}-\left(\sum Y\right)^{2}\right\}}} \\
& r_{x y}=\frac{105 \times 771372-10477 \times 7696}{\left.\sqrt{\left(105 \times 1139407-(10477)^{2}\right\}\left(105 \times 579088-(7696)^{2}\right)}\right\}} \\
& r_{x y}=\frac{30.994 .060-80.630 .992}{\sqrt{\left(119637735-(10477)^{2}\right\}\left(60804240-(7696)^{2}\right)}} \\
& r_{x y}=\frac{363068}{\sqrt{(119637735-109767529)(60804240-59228416}\}} \\
& r_{x y}=\frac{3630}{\sqrt{(9870206 \times 1575824}\}} \\
& r_{x y}=\frac{363068}{\sqrt{15553707499744}\}} \\
& r_{x y}=\frac{363068}{3943818,8} \\
& r_{x y}=0,092
\end{aligned}
$$

To answer the research question as mentioned in chapter I, is there any significant correlation between students' participation and their examination score in PeerWise online learning, it was needed to compare with r-table.

After the value of the correlation was found out, then it was calculated the significance of correlation coefficient test. The steps were :

## 1. Developing hypothesis

Но $\quad: r=0$

На : $\mathrm{r} \neq 0$

## 2. Determining Alpha

The alpha used is 0,05 (5\%)
3. Statistic test
$\mathrm{t}=r \sqrt{n-2}$

$$
\sqrt{1-r^{2}}
$$

## Decision rule :

a. If ttable $<$ ttest $<$ ttable , so Ho is accepted
b. If ttest < ttabel or ttest > ttable , so Ho is rejected

Ttest :

$$
\begin{aligned}
\mathrm{T} & =\frac{0,092 \sqrt{105-2}}{\sqrt{1-0,092^{2}}} \\
& =\frac{0,092 \sqrt{103}}{\sqrt{1-0,008464^{2}}} \\
& =\underline{0,092 \times 10,148} \\
& =\underline{\sqrt{1-0,008464}} \\
& \sqrt{0,933616} \\
& =0,933616 \\
& =0,995
\end{aligned}
$$

Ttable with degree of reliance over 95\%
Alpha 0.025 used (Paired sample T test)

Freedom degree $=n-2=105-2=103$

Ttable (0,025 : 103) $=0,931$

## Conclusion :

Because ttest > ttabel $(0,938>0,931)$, so ho is rejected and ha is received. It is mean there is relationship between two variables.


The researcher presents the discussion based on the findings, the review of related theory and analysis of the data to clarify the findings. The research focuses on the students' participation (very high, high, average, low, very low participation), score of examination (very good, good, average, bad, very bad), and the correlation between students' participation and their examination score in PeerWise online learning.

## 1.Interpretation of Normality Test

Since this research used parametric statistic to calculate the correlation between variable X and variable Y , the researcher tested the distribution of data. There are two kinds of test we can use to know the distribution of the data i.e Kolmogorov- smirnov test if the sample more than 50 (>50) and Shapiro-wilk test
if the sample less than $50(<50)$. Since the sample of this research was 105 or more than 50 so the researcher used Kolmogorov - smirnov test by using SPSS 16. The result of Kolmogorov-smirnov test was 13 . This means the distribution of the data is normal when the significance is more than 0,05 .

## 2. The Level of Students' Participation

Based on the result of the research finding on the level of students' participation, it could be seen from the table that the score range 136-150 was very high level in students' participation, in which 6 students belong to this level. There were 64 students whose qualification between the score range 101-135. It means that $0,61 \%$ of the students had high participation level. Besides, there were 20 students have average qualification which was between the score range 71-100, in which there are $0,19 \%$ of the students or 20 students were included into this level. Other, there was 15 students that has low and very low level of students participation whose score range between 35-70 and 35-0. At last, the researcher summarized that most of students had high participation level consist of 64 students.

From the data above, we can conclude that almost all of students have high participation that is most of them have positive relationship toward their examination score. It means that if the students have high participation in PeerWise online learning, so their examination score also good. The change of students' participation level was positively followed by students' examination score. If the students' participation increased and their examination score increased too. To be remembered that students who have high level participation
in PeerWise are not always have good score on other subject. It just has an impact in concerned variable, means both variables has influence one another.

On other hands, the students who has low level and very low-level participation included only 15 students. We can assume that they has low participation in PeerWise. It means that student left included 90 students have the average-high enthusiasm to participate in making a question and answer question on PeerWise online learning.

## 3. The Level of Students Examination Score in PeerWise

The table showed that there were 65 students or $0,62 \%$ of the students had "good" qualification , in which the score range was 61-80. $0,23 \%$ of the students were between the score range 81-100. It means that 24 students were included into "very good" qualification. Meanwhile, 16 students or $0,15 \%$ of the students were between the score range 41-60, means that they were included into "average" qualification. In other hand, there was no student neither in "bad" nor "very bad" qualification which were between the score range 21-40 and 0-20. Finally, the researcher summarized that most of students had good qualification level consist of 65 students.

Based on the findings above, we can conclude that the most of students have good examination score. If they have good examination score, means that they have to high enthusiasm to participate in question authoring and question answering component in PeeWise online learning. Moreover, there were no students who have score in range $0-40$. Those are proof that most of students are diligent and high motivated to get online learning through web-based application

## 4. The Correlation between Students' Participation and Their Examination Score

After calculating the normality test, in which it shows that the data distribution is normal, it is calculated the correlation between students' participation and examination score.

From the calculated data, it was found that the value of product moment correlation between students' participation and their examination score in PeerWise online learning was 0,092 . It meant that the correlation was positive correlation. The change of students' participation level was positively followed by students' examination score. If the students' participation increased and their examination score increased too. Considering the Pearson Product Moment Correlation, it was only used to find the degree of the correlation between variables which was to find the strength of correlation between two variables, not to measure the influences between a variable to other.

Furthermore, the r-observation was 0,092 that we could interpreted in the simple way of interpretation that it was classified as very low correlation meaning although the correlation had positive correlation but the correlation was in the very low level which had very limited correlation.

Then, the t -tested was compared with t -table, it was found that r -tested higher than r-table which could be concluded that there was relationship between students’ participation and their examination score in PeerWise online learning. Therefore, it gave evidence for hypothesis that there is positive correlation between students’ participation and their examination score in PeerWise online
learning at UIN Sunan Ampel Surabaya was accepeted. While for the null hypothesis that there is no correlation between students' participation and their examination score in PeerWise online learning at UIN Sunan Ampel Surabaya was rejected.

The table below can interpret the Correlation Coefficient (r)

| Correlation Coefficient ( r ) | Interpretation |
| :---: | :---: |
| $0,00-0,20$ | Very weak |
| $0,21-0,40$ | Weak |
| $0,41-0,70$ | Moderate |
| $0,71-0,90$ | Strong |
| $0,91-1,00$ | Very strong |

In conclusion, the result of data analysis showed that the students' participation in PeerWise online learning had high participation as well as good examination score in Language testing class. Therefore, both variables correlated positively.

