CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

The research was carried out based on casual-comparative research design. The design seeked to investigate the differences between two or more different methods or groups. According to Gay et al. (2012) if the researcher does not have control the grouping variable or cannot manipulate the variable, "causal-comparative research is useful in those circumstances."

B. The Location and Time of the Research

This research was conducted on the 2nd - 5th of October 2017. It took place in English Education Department of State Islamic University of Sultan Syarif Kasim Riau.

C. Subject and Object of the Research

1. Subject of the Study

The subject of this research was the fifth semester students of English Education Department of State Islamic University of Sultan Syarif Kasim Riau 2015.

2. Object of the Research

The object of this research is the comparison of students' speaking fluency analysis between perceived and utterance at English Education Deparment of Teacher Training Faculty in State Islamic University of Sultan Syarif Kasim Riau.

D. Population and Sample of the Study

1. Population of the Research

According to (Creswell, 2012, p. 142) said "population is a group of individuals who have the same characteristic". The population of the research was the students at fifth semester of English Education Department. Total numbers of the students as follow:

Table III.1

Table Class Distribution

No	Class	Number of Students
1	EED/V/A	28
2	EED/V/B	27
3	EED/V/C	28
4	EED/V/D	27
5	EED/V/E	28
6	EED/V/F	27
7	EED/V/G	27
Total		192

2. Sample of the Research

According to Arikunto (2006, p.51), if the population is more than 100, the researcher can take 10%-15% or 20%-25% of it. the researcher takes 20 students as the sample of this research which takes 10% of all of the population and the technique for choosing the sample the researcher used simple random sampling.

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E. Technique of Collecting the Data

After the speech has been collected, the researcher started the measure to find out the level of sample's speaking fluency. The measurement by researcher was use Utterance and the raters were used Perceived. There are two raters was analyzed the sample. Rater A take the master degree in Bristol University United Kingdom and IELTS instructure in one of private company in Pekanbaru. Rater B take the master degree in one of private university in Malaysia and also work as the IELTS instructure in one of private company in Pekanbaru.

The procedure of collecting data the researcher used the students' speaking documentation that was measured by the raters and by the researcher.

F. Technique of Data Analysis

1. Perceived and Utterance Fluency Analysis

a. Perceived Fluency Analysis

The researcher asked 2 raters who capable and master in speaking fluency to analyzed the samples by following the fluency scale ordinate from De Jong and Hulstjin (2009) and the raters also must mastering the component of the speaking fluency. The avarage of the score from the raters is the final score of students speaking perceived fluency analysis.

b. Utterance Fluency Analysis

The researcher analyzed the samples by using Audacity to calculate the speaking fluency components. After the components ahs been counted, the researcher used the formula to get the score of students speaing fluency by using utterance analysis. The calculation is formulated as following:

1) Speech Rate (SR)

$$\frac{ns}{ts} \times 60 = sr \qquad\qquad \frac{sr}{230} \times 100 = SRS$$

ns : Number of Syllable

ts : Time in Second

sr : Speech Rate

SRS : Speech rate Score

2) Pause Rate (PR)

$$\frac{np}{ts} \times 100 = sr$$

$$100 - \left(\frac{np}{120} \times 100\right) = PRS$$

np : Number of Pruned Syllable

ts : Time in Second

sr : Speech Rate

PRS : Pause Rate Score

3) Disfluent Syllable Rate (DSR)

$$\frac{nd}{230} \times 120 = dsr$$

$$100 - \left(\frac{nd}{230} \times 120\right) = DSS$$

nd	: Number of Disfluent Syllable
203	: Normal Amount of Syllable/Minute
ds	: Disfluent Syllable Rate
DSS	: Disfluent Syllable Score
100	: Maximum Score

4) Mean Length of Run (MLR)

$$\frac{ns - np}{460} = MLR$$

ns	: Number of total Syllable
np	: Number of Pruned Syllable
460	: Normal Amount of Syllables/ 2 minutes
MLR	: mean length of Run

With all there four measurements of fluency in which maximum score is 100 the mean score is figured out. The following formula is used to get the mean score of each sample:

$$M = \frac{\sum x}{N} \rightarrow M = \frac{SRS + PRS + DSS + MLR}{4}$$

M	: Mean Score
SRS	: Speech Rate Score
MLR	: Mean Length of Run
4	: Four measurements of Fluency

2. Statistical Analysis

To find out whether there are the differences, the writer used statistical method that is independent samples t-test formula by using SPSS.16.0 version. According to Pallant (2010) an independent samples t-test is used when you want to compare the mean score, on some continous variable, for two different groups of participant. So, the researcher used independent samples t-test because the researcher want to compare the mean score in two different groups; perceived and utterance based test score.

The result of the formula was obtained statistically through the hypotheses below:

a. Ho: Sig.Value > 0.05. It means that Ho has accepted; there is no significant difference between Perceived and Utterance measurement on students' speaking fluency.

b. Ha: Sig.Value < 0.05. It means that Ha has accepted; there is a significant difference between Perceived and Utterance measurement on students' speaking fluency.