

## CHAPTER III

### RESEARCH METHODOLOGY

In this chapter, the research methodology applied in this research is comprehensively elaborated. Firstly, the elaboration starts with the application of sequential-explanatory mixed-method comprising informal experimental and descriptive design. Then, a comprehensive elaboration on sampling design which includes research sampling method as well as the determination of representative sample size is elaborated. Afterwards, operational definitions of the research variables are pointed out. Description on the research instrument, data collection and data analysis follows afterwards.

#### **I. Research Design**

##### **A. Quasi-experimental design**

Quasi-experimental design was applied in accordance to one of the research objectives namely to test a hypothesis on degree of CF implicitness, from the two error-marking strategies, to affect revising-progress. As defined by Rasinger(2010, p. 59) and Kothari (2004, p. 39), experimental design (or also be referred as hypothesis-testing research) is a type of study which involves the manipulation of variables in order to test hypotheses. Given that the manipulation of treatment (independent variable) was at the very core of the journey towards the scrutiny of effect-comparison between two unfocused-implicit CF techniques, to apply an experimental design was thus a necessity. Regarding respective research design, Kothari breaks down the term into more specific categorization. It can be said that such categorization was based on the complexity, existence of control group and the randomization of sample-drawing (2004, p. 41). Despite being considered the least complex and the most likely to be interfered by extraneous variable amongst other experimental-research types, *before-and-after without control* experimental research-design was chosen.

As seen from figure 3, '*before-and after without control*' experimental design refers to an experimental design in which the level of phenomenon in a

single group is measured prior to the provision of treatment and after the provision of research treatment (Kothari, 2004). Modification, however, was made in accordance to the research objective namely to statistically compare the two types of unfocused-implicit CF techniques in terms of treatment effect on grammar-revising progress. Thus, further definition on experimental unit was made (see figure 4). Instead of only involving one experimental group, two groups receiving different type of treatments were involved.

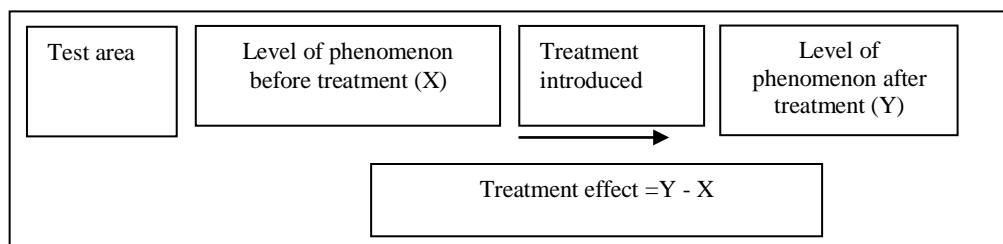


Figure 3. Before-and-after without control informal-experimental design scheme (taken from Kothari (2004. p.41)

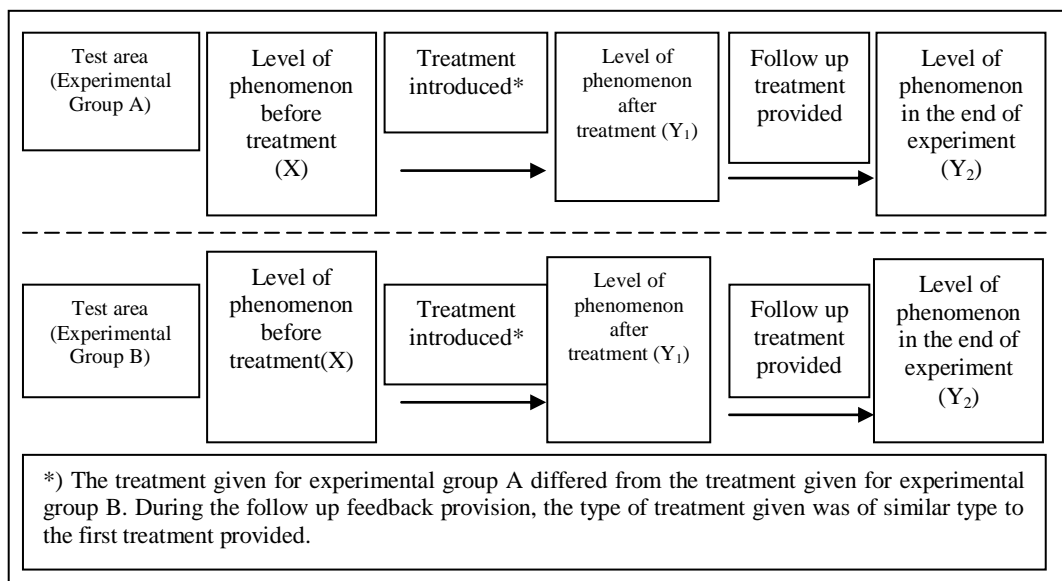


Figure 4. Modification on Kothari's Before-and-after without control informal-experimental design.

To be more specific, the modification of Kothari's scheme on *before-and-after without control* experimental design comprised two major things. Firstly, instead of only involving one experimental group, two experimental groups were involved. The treatment, unfocused-implicit CF technique, given to both group

were different each other. Secondly, instead of being provided only once, the treatment provision was extended into two provisions. The type of follow-up CF (the second CF) given was similar to the type of CF given in the first provision hence each experimental group only received one type of CF during the experiment.

#### 1. The application of experimental design

Referring to Hayes' model of writing (figure 1, p.9), there are three levels comprised within a writing process. They are control level, process level and resource level. The followings are the clarification of how the experiment was conducted following Hayes' writing model.

In control level, the elements that were included were motivation, goal setting, and current plan. It has to be noted that this research was conducted in two Foundation of English Grammar (FEG) classes in English Department, Indonesia University of Education. Following the allowance from the instructor to conduct the experiment in her class, drafting tasks were designed where the final draft would be assessed and the score would be included in their final FEG-course score. Hence, it is fair to say that the motivation behind the participations of the participants was to attain an additional score to increase their final score. During the introduction of the research, the researcher socialized the steps the participants were going to undertake in attaining such score.

The second level comprised in Hayes' latest writing model is process level which is divided into two sub-levels, writing processes and task environment. Within the writing-process sub layer, the role of evaluator was taken by the researcher himself under the supervision of the FEG-course instructor. Hence, it is fair to say that the CF provided fell under the category of teacher feedback. Meanwhile, the participants played multiple roles as the proposer, translator and transcriber. On the second sub-level, task environment, there are four elements comprised within. Firstly, in *collaborators and critics* part, it has to be noted that there was no involvement of peer reviewing/ editing activity. The criticisms were solely provided by the researcher who also played the role as a collaborator under

the supervision of FEG-course instructor. In terms of *transcribing technology*, word-processing software was utilized given that the submission of drafts and the provision of corrective feedback were done through internet interaction. In *task material, written plans*, the proposers (participants) were given a set of pictures in assisting them planning the writings they were about to produce. Lastly, regarding the *text written so far* part of Hayes' writing model, the term *revised draft* and *final draft* used in this research represent the product of transcription done by the participant (transcriber) after going through evaluation phase (provision of unfocused-implicit CF) and translation phase (making sense of the error-marker implicitness).

The last level in Hayes' writing model is resource level which comprises attention, working memory, reading and long-term memory. It has to be noted that the elements of attention, working memory and long-term memory were not measured prior to the execution of experiment and hence being considered extraneous factor. The *reading* element, on the other hand, was being deliberately manipulated given that all participants were given similar material in the form of a set of pictures in order to assist them planning and generating ideas for their writing.

## **II. Sampling Design**

### **A. Research site**

This research took place in English Education Department, Faculty of Language and Arts Education, Indonesia University of Education. More specifically, the researcher focused on the English-majoring undergraduate students who were taking Foundation of English Grammar (FEG) course in the academic year of 2012/ 2013.

### **B. Research population**

In this research, the population chosen was two out of four FEG classes in English Education department, Indonesia University of Education. The decision to select FEG classes was made under the assumption that the students were given

similar amount of grammatical-knowledge input from FEG course when the experiment took place thus the students possess a more relatively homogenous grammatical knowledge. Cargan (2010) suggests that the purpose of the study is an essential determining factor in deciding the size of research-population (2007, p. 236). Considering the research being geared towards the scrutiny of the effect resulted from two types of error-markers in unfocused-implicit CF provision, the involvement of two FEG classes was considered adequate as a representation. In addition, given the circumstances, the lecturer external-factor was taken into consideration given that the other two FEG classes were taught by different lecturers.

Referring to Kothari (2004, p. 56), to know exactly whether the population (universe) is finite or infinite is essential given that such nature determines how the sample is chosen. Having finiteness of the population being determined by the measurability of the item-quantity (Kothari, 2004, p. 54), the population chosen in this research was labeled finite. The total student enrolled in the course was 92 students comprising 75 freshmen (81,5%), two sophomores (2,2%), eight third-year students (8,7%) and seven fourth-year students (7,6%).

### C. Research sampling

#### 1. Representative sampling size and sampling method

The number of participants to be involved in the experiment was determined by an approach which was based on confidence level and precision rate. In this research, the confidence level was set at 95% along with precision-rate value which was set at .05. The decision on setting the precision-rate value at .05 was based on the notion that such value could generate conservative sample size as suggested by Kothari (2004, p. 180).

Being calculated using the formulae (see Appendix A), the sample size considered adequate in representing the population were 10 students out of the 92 students enrolling in FEG course during the semester the research took place. In accordance to Kothari's criteria of reliable research sample (2004, p. 58), the

obtained number of 10 was fair to be claimed as reliable given the formula had already taken precision rate and level of confidence into consideration.

Regarding the sampling method, non-probability sampling was used. Due to research limitation, immaturity in designing the research, the principle of randomization was absent in this research thus non-probability sampling-technique was applied instead. As defined by Kothari, such sampling technique allows the researcher to deliberately choose the individuals/ items to be taken as research sample, thus element of bias becomes inevitable (2004, p. 59).

It has to be noted that in the beginning of the experiment, all of the 92 students within the population were involved in the research and thus given research treatment. However, in the course of the experiment, 28 students did not finish all research tasks (see figure 8, p.39) leaving 64 students (69%) qualified to be involved in the analyses. Referring back to one of Kothari's criteria of reliable sampling design, the assurance that systematic bias is controlled (2004, p. 58), the quantity of the research sample was multiplied in pursuing Cargan's idea on greater quantity to strengthen research-finding quality (2010). Regardless 10 students being considered adequately representative to the chosen population, 54 more students were deliberately chosen resulting in the total of 64 participants to be further involved in this research. In the process of assigning the 64 participant into the two experimental groups (A and B), the research used the existing group based on the learning group (classes) determined by the institution.

### **III. Operational Definition of Research Variables**

#### **A. Dependent Variable**

As can be referred from figure 5 (p. 27), the experimental unit of the experiment was designed so that two provisions of treatments, unfocused-implicit CF, were facilitated. To comprehensively clarify the operational definition of the two dependent variables in avoiding miss-perception is necessary. The operational definition of the two dependent variables is elaborated below.

## 1. Error reduction in the first revising attempt

As has already been mentioned in the *clarification of key term* section in Chapter I, the term revising-progress used in this research doesn't refer to the improvement of learners' writing score as measured by tests. The term revising progress refers to the percentage-value of error of each learner during three drafting process (rough draft/ original draft, revised draft and final draft). Given that the experimental counterpart of this research demands score under interval scale, the value of revising progress was obtained by calculating the percentage value of the number of error occurrence in each drafting process and the total clause the participant had produced in the original draft into equation.

A grammatical error was considered successfully revised when the reviser had made an accurate revision on the respective error through different means of revision resulting in a coherent clause. On the other hand, a grammatical error was considered unsuccessfully revised when the reviser either failed at performing accurate revision towards the marked item or performed unnecessary omission of the marked item. For instance, in the clause "... as the **national biggest** annual event called Eurovision Song Contest" taken from the essays written by participant A1, the green error-marker implicitly indicated the need to reorder the words to form a proper noun-phrase modifier. In the revision progress, participant A1 omitted one of the words resulting in the clause as follow: "as the biggest annual event called Eurovision Song Contest". Despite the clause being modified into a grammatically coherent one, in this research, the omission of the word "national" was considered a failure in performing revision.

## 2. Error reduction in the final revising attempt

This second research variable takes the percentage of successfully revised marked-errors in the end of the experiment compared to the number of errors marked in the original draft. Apart from that, all of the details previously elaborated in the operational definition of the first dependent variable are applicable for this second research variable.

## B. Independent Variable

### 1. Error-marking techniques

In distinguishing the degree of corrective feedback implicitness to be given to the two experimental groups, a modification of error-marking strategies previously used in Purnawarman's study (2011) was utilized. Two types of error-marking strategies were used namely coloring and comment provision. Both of the error-marking strategies were implicit in nature given that no explicit revised-revision was provided.

Regarding the coloring error-marking used as one of the unfocused-implicit CF techniques, several colors were used. This color error-marking was also used in Purnawarman's study on CF (2011). Taking the same research-setting, English Department – Indonesia University of Education, Purnawarman used three colors namely yellow for indicating article-error, bright green for indicating preposition-error and turquoise for indicating errors on past-tense verbs. Due to the scope of CF being unfocused, more colors were used during the CF provision. However, instead of providing different color for each category of error, the categorization was one-or-two-layer less-specified.











	<i>Error on word choice which is needed to be changed. It varies from wrong choice of preposition, wrong choice of article, irrelevant word.</i>		<i>Error on the use of possessive marker</i>
	<i>Error on singularity/ plurality of a noun</i>		<i>Words that are unnecessary (to be deleted)</i>
	<i>Error regarding the wrong choice of a word's derivational form</i>		<i>Error on the phrase-construction. E.g, jumbled order, grammatically-incorrect modifier</i>
	<i>Error regarding non-finite form</i>		<i>Error regarding the absence of a necessary lexicon/ part of clause and phrase..e.g missing be or determiner.</i>
	<i>Error on tenses; wrong inflection of verbs</i>		<i>Syntactical error: absence of subject, verb, object; Jumbled order causing confusion.</i>

Figure 5. Different colors used as error markers provided for experimental group A

It has to be noted that participants were not given adequate information on the meaning behind each color as error-marker. The instruction given to the



participants was “some grammatical inaccuracies in your writing had been marked with different colors depending on the error-type”. Given that the participants were required to make sense of the meaning of each color given, it is fair to say that, the error-marking through provision of colors possess greater level of implicitness compared to the other unfocused-implicit CF strategy applied in other experimental group.

On the other hand, in this research, error-marking through provision of comment was considered attributed with milder level of implicitness. The utilization of MS-Word review/ comment feature was also applied in Purnawarman’s study (2011). In contrast to Purnawarman’s study in which review/ comment feature was used to provide explicit CF, the feature was used in providing explicit categorization of metalinguistic error-nature. It has to be noted even though the CF provider facilitated the participants with a more explicit guidance; the explicit expected-revision was not provided.

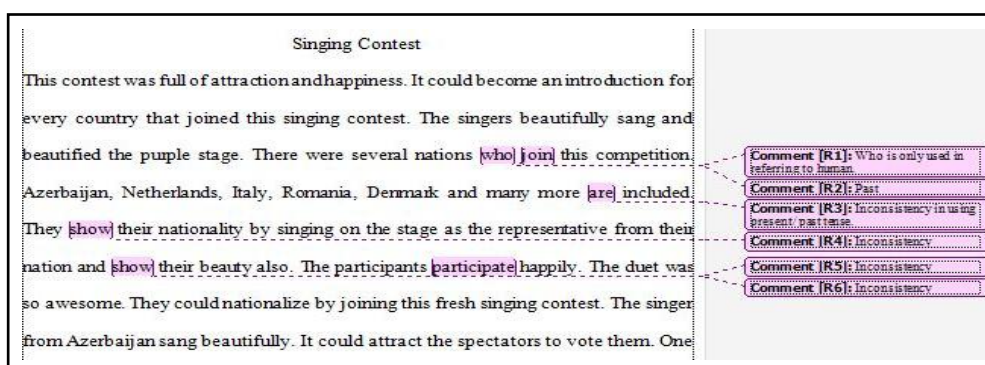


Figure 6. Example of comment as error markers provided for experimental group B

#### IV. Research instruments

##### A. Participants’ Essays

The primary data in this research was participants’ essays. The essays were attained from the experiment. As can be seen from figure 7 (p.35), each participant submitted three essays comprising original draft, revised draft and final draft. Percentage values needed for the analysis were attained from the analyses in

terms of error-occurrence frequency in participants' original draft, revised draft and final draft. In order to keep track of such frequency, a tally sheet was used.

#### B. Ms-Excel 2010 worksheet as a tally sheet

Given that the expected raw data was in form of number of occurrence (frequency) instead of test score, no test was used as research instrument. Instead, a tally sheet was used to keep track of the occurrence of error found within each experimental phase. Ms-Excel 2010 worksheet was used to keep track of each participant's progress in order to put ease in the sorting and calculating process.

### V. Data collection

It has to be noted that there were two types of data to be analyzed in this research. Firstly, the data was in the form of quantitative data depicting each reviser's success rate in revising grammatical error within their writing. Secondly, the data was in the form of records of reviser's essay comprising the original draft, revised draft and the final draft. The data, percentage value of grammar-revision success rate, were used in the experimental counterpart of the research whereas the essay records were used for the descriptive means. The qualitative data, participants' essay records, were collected sequentially after the course of experiment. For the quantitative counterpart, the raw data in forms of number of error occurrence as observed using tally sheet (MS-Excel 2010) was being converted into a percentage value by considering the number of error occurrence and total clause a participant had produced.

#### A. Data collection methods

Controlled-observation using MS-Excel 2010 tally sheet was used as the data collection method. Having the research being designed as a sequential-explanatory mixed method research, the qualitative data were obtained sequentially from the process of experiment. Raw data in forms of participants' original, revised and final essays were obtained. However, given the research being limited only on the scrutiny of grammar-revising progress, the already-obtained data must be further sorted out. Controlled-observation method was used

to serve such mean. Controlled-observation method is defined as the way of observing a phenomenon through a pre-arranged plan in forms of the involvement of experimental procedure and instruments (Kothari, 2004, p. 96). MS-Excel 2010 worksheet was used to serve the function as a tally sheet in keeping track of the progress taking place within each reviser. Similar to the function of conventional use of tally sheet as a researcher instrument, the MS-Excel 2010 was used to measure the frequency of errors in the original draft, revised draft and final draft.

## B. Data collection procedure

As has already been elaborated previously, the data for the experimental half of the research was obtained through the application of controlled-observation method whereas the raw essay-records were used for the descriptive counterpart. The procedure in collecting the research data itself mostly follow the four stages of data processing as suggested by Kothari (2004, pp. 122-129).

### 1. Editing

The process of editing can be defined as the examination of raw data to detect errors and to correct them when possible (Kothari, 2004, p. 122). He further adds that “editing is done to assure that the data are accurate, consistent with other facts gathered, uniformly entered, as completed as possible and have been well arranged to facilitate coding and tabulation” (p. 123). Given the limitation on the provision of treatment, lack of inter-rater reliability, prior to the data analyses the accuracy of CF given was reevaluated. Either errors that were missed to be marked or errors that were unnecessarily marked were noted. Passing through the editing phase, out of 2.337 errors identified within the 64 chosen participants’ essays, 1.701 error cases were rendered accurately marked and thus being taken as items to be analyzed.

### 2. Coding

MS-Excel 2010 program was used in coding the raw data obtained from the experiment. In accordance to Kothari, coding can be understood as the process of assigning numbers or other symbols to each datum in order to categorize it into

classes (2004, p. 123). The coding phase, along with the editing process, was aimed at putting the data, error-cases, into two categories. Firstly, the error-cases which were accurately marked were put under the *sample* category whereas the error-cases which were either inaccurately marked or missed to be marked into *non-sample* category. From these evaluative phases, 1.701 error-cases were categorized under *sample* category out of 2.337 total error-cases.

This process was done by carefully reevaluating each participant's essay. Firstly, the sentences in the original draft were broken down into clauses and these clauses were being pasted into rows of MS-Excel 2010 worksheet. Afterwards, the renewed versions of clauses from participant's revised and final draft were also being pasted in line with the clauses from the original draft (see Appendix C). In cases where there were more than one grammatical errors within one clause, the respective clauses were pasted into another row resulting in each row only representing one error-case. Consequently, a clear view on how the revision took place was available in a three-columned table (see Appendix C). Having two programs running, MS-word file of marked participant's essay and MS-Excel worksheet, the error-markings were reevaluated in terms of accuracy. The accurately marked errors were labeled '1' whereas the missed or inaccurately marked errors were labeled '0'. Using MS-Excel 2010 *sort* feature, the '0'-labeled errors were being put together and thus could easily be removed from the worksheet. Afterwards, MS-Excel 2010 *SUM* formula was used in order to obtain the number of error-cases included as research sample.

### 3. Classification

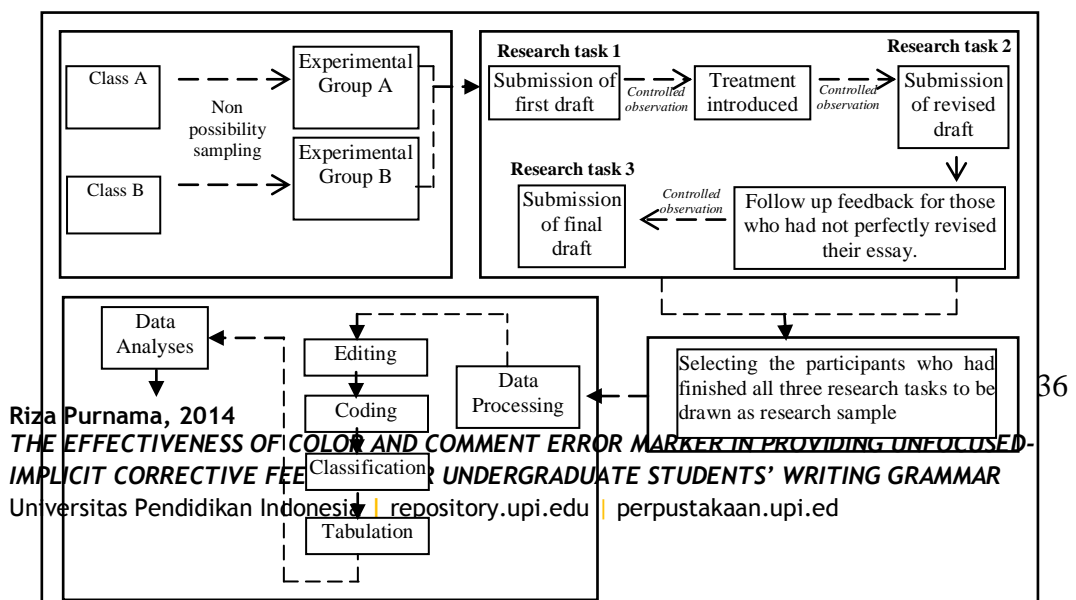
Following the editing and coding process, the sample error-cases were further being classified into more specific categories. The research objective was to reveal the effect of the two types of unfocused-implicit corrective effect on the revision of different error-types. Referring to Dulay, Burt and Krashen's seven categories of negative-interference driven errors (1985) (see table 1, pp. 13-14), the error-case samples were being labeled '1' to '8' according to the error category.

More specifically on the classification phase, 8 columns were prepared and labeled ‘1’ to ‘8’ representing each error-type. ‘1’ for *omission*; ‘2’ for *double-markings*; ‘3’ for *regularization*; ‘4’ for *addition*; ‘5’ for *miss formation*; ‘6’ for *archi form*; ‘7’ for *miss ordering* and ‘8’ for other types of error. Having each row representing one error case, the classification was done by typing the number ‘1’ in the column corresponding to the error type.

Furthermore, concurrent to the classification of error category, each error-case was also labeled based on whether or not it was being successfully revised. Four more columns labeled ‘*successfully revised in first attempt*’, ‘*successfully revised in final attempt*’, ‘*unsuccessfully revised*’ and ‘*omitted*’ were prepared (see Appendix D). Referring to the first three columns comprising the clauses’ grammatical alterations, the classification was done by typing the number ‘1’ on the column corresponding to the circumstance of revising success. In the end of the phase, the MS-Excel 2010 *sort* function could easily cluster the error-cases of the same category which put ease into the tabulation process.

#### 4. Tabulation

Lastly, having the data already being classified, the tabulation to attain the value to be included in the analyses was executed. Referring to the individual record of data, a new MS-Excel worksheet was prepared to comprise all necessary values to be included in the analysis. As has already been explained in the sub chapter on operational definition of dependent variable, the value of revising progress was obtained by calculating the percentage value of the error occurrence in every research phase to the total clause produced by the participant.



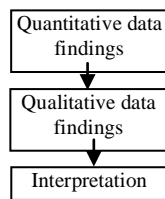


Figure 7. Research scheme

## V. Data analysis

As mentioned in chapter I, there was only one question formulated in this research. In order to answer this question, several statistic formulae were used to measure the difference on the value of dependent variables after the treatments were introduced. Sequentially, qualitative description was also used as a mean of answering the question. The steps that were taken in the process of analyses were as follow:

### A. Steps taken in statistically comparing the two error-marking techniques

#### 1. Setting null hypotheses

Assuming that undergraduate students had already possessed Saville-Troike's notion of adults' learner advantage in language learning which includes learning capacity and analytic ability (see table 5, p. 23), it could be assumed that the different degree of implicitness wouldn't matter as long as markings are given. Thus, there are two null hypotheses to be proven in this research: 1) There is no significant difference between the effect of color error-marker and comment error-marker on participants' first-revising attempt; 2) There is no significant difference between the effect of color error-marker and comment error-marker on participants' final-revising attempt. If the obtained value was more than the significance level set at .05, the difference would be rendered statistically insignificant.

#### 2. Processing the data obtained from the experiment

The obtained data from the process of experiment were firstly being processed hence interval data were attained. Such interval scores were in the form

of percentage-value of error-occurrence (unsuccessfully revised error) within each research phase to the total clause produce by respective participant. In the end of the tabulation process, each participant was being attributed with two percentage values representing both his progress in the first revising attempt and his progress in the second (final) revising attempt.

### 3. Determining the normality of data distribution

As suggested by Kranzler, normality of data distribution is considered essential in determining the choice of using parametric or non-parametric formulae (1999, p. 119). A parametric test, which in this case was t-test, is only applicable when the data is normally distributed (Kranzler & Moursund, 1999, p. 119). To measure normality of a set of data, two means can be applied. Graphical interpretation can be used as well as numerical interpretation through the application of one-way ANOVA test (Kranzler & Moursund, 1999). In this research, graphical interpretation was used in interpreting the normality of distribution. In doing so, IBM SPSS Statistics 20 was used following these steps:

- a. Copy-pasting the tabulated interval data from MS-Excel database to SPSS worksheet. The 36 percentage values attained from the 36 participants in experimental group A in the first revising attempt were pasted into a column in the SPSS worksheet whereas the interval values in the final revising attempt were pasted into different column. Afterwards, the interval values of experimental group B were pasted into similar column. Hence, there were 64 values in each column which normality of distribution was to be determined. The two columns were then labeled as *first revision* and *final revision*.
- b. Choosing *analyze* menu of IBM SPSS Statistics to attain a graph depicting the data distribution normality. Under the *analyze* function, *descriptive statistic* function was chosen. Afterwards, *frequencies* function was selected.



- c. A dialogue box was opened to enter the column (variable) to be analyzed. Having the two columns already being labeled, the *first revision* variable was chosen to be analyzed first. Given the goal was to attain a graph depicting data distribution, *chart* menu was clicked to choose the type of chart to be produced in the output. *Histogram* chart was selected and a tick was put on the option *show normal curve on histogram*.
- d. Creating the histogram by clicking the OK button.
- e. Determining if the data distribution, as shown in the histogram was normally distributed by identifying if the shape of the curve was bell-shaped or skewed. Kranzler&Moursund (1999) state that normally distributed data will show a bell-shaped curve.
- f. Determining the data distribution of *final revision* variable by following similar steps.
- g. Applying parametric or non-parametric test.

The intention of the application of statistical test in the analyses was to determine the significance value of difference between the two experimental groups in terms of their grammar-revising progress. In doing so, the statistical tests needed were the ones that allow the comparison between two experimental groups. The options provided under parametric test were independent t-test whereas the options provided under non-parametric test were Mann-Whitney u-test.

Kothari states that seen from type of data being analyzed, data in interval and ratio scales are parametric (2004, p. 69). Regardless the data obtained fell under the interval scale category, to apply parametric test (independent t-test) might not be fair without the consideration on normality of data distribution. As suggested by Kranzler&Moursund, a parametric test is only applicable when the data is normally distributed (1999, p. 119). Consequently, to consider the data type and normality of data distribution is essential in determining the use of parametric and non-parametric test in providing reliable findings. IBM SPSS



Statistics 20 was used in analyzing the significant difference between the effects of two strategies.

Having the necessary interval data had already been pasted into the SPSS worksheet, another column labeled “*treatment*” was provided. Number “1” was typed in representing error-marking through color whereas number “2” was typed in representing error-marking through comment. The provision of this additional column was necessary in the process of analysis either using independent t-test (parametric) or Mann-Whitney u-test (non-parametric). Both independent t-test and Mann-Whitney u-tests function could be found under IBM SPSS Statistics 20’s *analyze* menu. Independent t-test function can be found under *compare means* sub-menu whereas Mann-Whitney u-test can be found under *non-parametric test* sub-menu on *legacy dialogue – 2 independent samples* options. The significance level was set under the value of .05 ( $\alpha = .05$ ) in a two-tailed test. Hence any number greater than .05 would be considered strong enough to reject the null hypotheses.

#### B. Complementary analyses

1. Exploring the effect of the two CF strategies towards the revision of negative-interference driven errors
  - a. The first step taken was done during the coding and codification process (see page 36-37) . In these phases, the error-cases that had already been verified in the editing phase were being categorized based on Dulay, Burt & Krashen’s seven category of negative-interference driven errors. The categorization was done by putting the number “1” on one of the columns.
  - b. Having the errors being labeled by “1” on different columns, the calculation of frequency of each error category was simply determined by using MS-Excel 2010’s *SUM* formula.
  - c. Having acquired the number of the occurrence of each error category in original draft, another *SUM* formula was reapplied in the tally sheet of error-cases in final draft. Consequently, a comparison between the error-

case before and after the treatment within an experimental group was being translated into graphs.

- d. These steps were also being applied to the tally sheets of the other experimental group.
  - e. The last step taken was to interpret the comparison of effect of the two CF strategies towards the revision of negative-interference driven errors.
2. Determining the circumstance where the use of the two strategies ended up in futile revisions

As suggested before, out of the 92 students within the population, to choose ten students as research sample was considered representative enough. Given that the essential part of a descriptive design is to randomly choose the samples; out of the 64 students finishing the research tasks, five students from each experimental group were randomly chosen. The randomization was done following these steps.

- a. Listing the participants who did not perform successful revision in the end of the experiment.
- b. Writing down the aliases of those participants on a piece of paper and putting them on a jar.
- c. Randomly choosing five participants from the box whose records of revision were to be scrutinized.
- d. Reapplying similar steps to choose another five samples from the other experimental group.
- e. Having ten participants already been randomly chosen, the essay records of respective participants were scrutinized in order to investigate how the two CF strategies had contributed to the success and the failure of revising attempt.