CHAPTER THREE: METHODOLOGY

Quasi-Experimental Study

3.1. The Notion of Methodology

Generally research in common speech alludes to a search for knowledge. In fact we can also define research as a scientific and systematic search for appropriate information on a particular topic. It is obvious that research is an art of scientific investigation. The Advanced Learner’s Dictionary of Current English mentioned the meaning of research as “a careful investigation or inquiry especially through search for new facts in any branch of knowledge.” Redman and Mory (1933) describe research as a “systematized effort to gain new knowledge.” Research is an academic activity and as such the term should be used in a technical sense. According to Goddard& Melville (2004) “research is not just a process of gathering information, as is sometimes suggested. Rather, it is about answering unanswered questions or creating that which does not currently exist. In many ways, research can be seen as a process of expanding the boundaries of our ignorance”. The aim of the survey is to evaluate the impact of web-based collocations instructions on essay writing and speaking ability for Freshmen College in the JSS College for Women in Mysore, India.

This chapter explains the methodology which is applied in the experimental and survey study. First, the setting, participants, sampling, design, target form, treatment materials, measurement instruments, and the procedures of data collection, data analysis and statistical analysis of the quasi-experimental study are all explained in detail. The same will be done for the survey study.
3.2. Setting

The research was organized in freshmen classes at the JSS College for Women in Mysore city, India. This college is affiliated to the University of Mysore in India. It is reaccredited by NAAC with A grade and recognized as college with potential excellence by UGC for the intellectual development of students. The college has three departments: Arts, Commerce and Science.

Each department has some disciplines. For example Arts department offers courses in: English, Sociology, Sanskrit, and Economics. The students who study English participated in this research. There are usually two semesters in a year of course. Each semester in this college lasts four months. Classes are held twice a week on Saturday-Wednesday, Sunday-Tuesday or Monday-Thursday. Each class lasts 60 minutes. The pedagogical approach adopted by the college is a combination of Web-base collocations instructions and communicative language instruction aiming to develop students’ linguistics accuracy and communicative language ability.

3.3. Participants

Two intact ESL classes and of 76 female students participated in this study. The number of students per class ranged from 18 to 21 but the data of 65 students were analyzed. Because some of the students were absent from classes on the day of the of the pre-test or post-test or missed the treatment sessions or were excluded from the study based on their extreme scores on the proficiency test. Information obtained from a questionnaire revealed that all students are Indians and their native language was kannada (local language) while English was their second language. They had English background from their school. All students never visited abroad (an English speaking country). The background information for the final pool across the two group, one
experimental and one control group is shown in Table 1. The class of Students who selected as the experimental group is equipped with thirty one computer and internet.

**Table 3.1. Number, age and gender of the students per group**

<table>
<thead>
<tr>
<th>Group</th>
<th>Number of Participants</th>
<th>Age</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>35</td>
<td>18-21</td>
<td>Female</td>
</tr>
<tr>
<td>Control</td>
<td>32</td>
<td>18-21</td>
<td>Female</td>
</tr>
</tbody>
</table>

### 3.4. Sampling

The study was quasi-experimental in nature, 2 intact classes at the JSS College for Women in Mysore, India were included in this study. This type of sampling which is referred to as convenience or opportunity sampling is the common type of sampling in second language research and is commonly used when the participants possess specific key characteristics that are related to the purposes of research.

Generally it ought to be stated that a real experimental design need three significant basic situation: 1) getting a sample from a well-defined population, 2) random assignment of individual learners to different groups, and 3) using a control group, most of the web-based collocations instructions studies adopt a quasi-experimental design due to the first and second conditions cannot be easily met in web-based collocation instruction.

### 3.5. Human Subjects Issues

An informed consent form was prepared by PhD supervisor and given to the principal of the college for contributing in this research (Appendix 7). Additionally, a college permission from the college management was also acquired (Appendix 6).
3.6. Design

The study used a pre and post achievement test design with two Indian freshmen classes which were randomly assigned to one experimental group and one control group or a comparison group. The control group only engaged in communicative task without provision of web-based collocations instructions and contributed in the pre-test and post-test. The experimental group contributed in the web-based collocations instructions treatment which lasted 3 month.

3.6.1. Variables of the Study

The independent variable was web-based collocations instruction in this study. The dependent variable was the freshmen college students' collocational knowledge, writing and speaking ability.

3.7. Instruments

3.7.1. Treatment Materials

For the purpose of engaging students in communicative utilization of English language, web-based collocations instructions were used as treatment instruments in this survey. In each session, some collocation was taught to the students. Instructor used Cambridge Advanced Learners Dictionary, Free Online Collocations Dictionary - Pro Writing Aid and Web concordances. The instructor also demanded students to write an essay and speak some minutes about specific topic while applying collocation in their activities.

Prior to treatment sessions, all the material had been piloted on one intact class of freshmen students in the same college and based on the results of piloting; web-based collocation instruction was adapted to the level of the students. The method of treatment was carried out in this study:
3.7.2. Measurement Instruments

To evaluate changes in contributors’ knowledge of collocation and proficiency in writing and speaking, the pre-test and post-test were utilized the following two tasks:

3.7.2.1. General English Proficiency Test

Prior to intervention, Nelson English Language Test for intermediate learners by Fowler and Coe (1976) was administered to the classes to ensure that the participants in each group were homogenous. The test encompassed with a cloze test and 50 multiple choice questions.

3.8. Reliability and Validity of the Measurement Instruments

In order to ensure that the measurement applied in the study produced valid results, following Hughes’ (1989) advice, the researcher asked two university teachers to offer an unbiased judgment as to whether the grammatically judgment tasks had content validity. Both teachers held a Ph.D. degree in Linguistics and had 15 years of teaching experience in university. The research instruments were all piloted before they were started. Reliability of the collocational knowledge test was evaluated for the pre-test, post-test using test and re-test method.

3.9. Data Collection and Procedure

One week before the treatment, the Nelson Proficiency Test which was utilized for the purpose of homogenizing the learners (in order to linguistics proficiency) was administered to the two intact classes which were selected for the purpose of this study. A number of outliers in each class whose proficiency scores were too high or too low were identified and their subsequent pre-test and post-test scores on two measuring instruments were removed. One week after the students the proficiency test, the pre-test which included collocational knowledge test, essay writing and
speaking test were administered in the two classes. The treatment session was
carried out twice a week and each session lasted 60 minutes.

For experimental group web-based collocations instructions were done. The new vocabulary was given to the students and instructor asked them to find out the suitable collocates of these vocabulary via Cambridge advanced learners dictionary, Free online collocation Dictionary and web concordances. If students did not understand the meaning or they could not found suitable collocates for that words instructor taught for them.

The unknown word was written in the center of the board, the instructor was wrote some collocates around that words as well as helped the students to learn which one collocates with that word. For instance:

<table>
<thead>
<tr>
<th>Table</th>
<th>Green</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room</td>
<td>Weather</td>
</tr>
<tr>
<td>Forecast</td>
<td>Hair</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Desk</td>
<td></td>
</tr>
<tr>
<td>Arranged</td>
<td>Marriage</td>
</tr>
<tr>
<td>Propose</td>
<td></td>
</tr>
</tbody>
</table>

When students learned these new collocation instructor asked them to write an essay and use these collocation. The sources for teaching collocations in this treatment are following books such as English Collocations in Use (McCarthy & O’Dell, 2005), Collocations Extra (Walter, 2010) and some dictionaries of collocations. Some examples of per session: Topic: love story

Target collocation: fairytale wedding - end in divorce – gain custody – love at first sight – propose marriage – arranged marriage.

New words: Spare - Scorching - Freezing - Smooth - Luxury - Budget - Travel arrangement - Make

Target collocation: Spare time - Scorching hot - Freezing cold - Smooth flight - Luxury hotel - Budget accommodation - Travel arrangement - Boarded the plane – Make a reservation.

For control group the new vocabulary was presented through traditional techniques such as synonym, antonym, definition and mother tongue equivalences.

A post-test was given two sessions after the last treatment. Post-test included collocational knowledge test, essay writing and speaking test were administered in the two classes.

The whole process of web-based collocation instruction treatment along with pre-test and post-test lasted for three months.

3.10. Data Collection Instruments

3.10.1. Collocational Knowledge earners’ Questionnaire

In order to evaluate collocational knowledge of the students the researcher gave a questionnaire to them. A set of close test consists of 45 questions; fill in the blank-match two parts-multiple choices. This task lasted 35 minutes. The researcher scored the test with the help of the BBI Dictionary, Mr. Stockdale’s Dictionary of collocations (2000), Oxford Dictionary of Collocations (2009), English Collocations in Use (McCarthy & O’Dell, 2005) and Collocations Extra (Walter, 2010). The maximum score for answering 45 questions correctly were 45 points. The questions
of each questionnaire in pre-test and post-test were different in order to prevent making them familiar with questions (Appendix 1 and 2).

### 3.10.2. Essay writing

For the purpose of evaluating essay writing proficiency, the researcher followed IELTS writing scoring method. The writing scores ranged from 1 to 9. This approach to writing assessment has been advocated by several scholars in writing assessment. The researcher proposed three topics for writing an essay in pre-test and post-test. All topics were differing from each other in order to prevent test-wiseness. This task lasted 45 minutes to write an essay around 250 words. The marking of the essays were done by the researcher. The final mark for each student was the average of the scores given by the two raters. To make sure inter-rater reliability, a practice session was held with regard to the IELTS scoring system; and also the two raters could completely comprehend the rating scale. In order to make certain the consistency of the raters in scoring, they corrected the writings of 65 students and their inter-rater reliability was calculated. The inter-rater reliability of 0.82 was obtained which is quite high and statistically significant. Some Samples of essays as an example are mentioned in the Appendix 3.

### 3.10.3. Speaking test

In order to evaluate speaking skill the researcher given speaking test in pre-test and post-test. The speaking test lasted for about 12 minutes for each student. It consisted of two parts. The first part was common topic for instance: family, hometown culture, interest or hobbies, education, university and daily life activities. The second part which was more difficult for the students was similar the second part of the speaking test of IELTS. In the second section students are given a topic card and then have one
or two minute to prepare after which they must speak about the given topic. The students were asked to explain, discuss, and give reasons about specific topic.

These questions gave students an opportunity to discuss more abstract issues and ideas. The researcher assigned scores to the students’ speaking according skill to the IELTS speaking test section. The speaking scores ranged from 1 to 9. Samples of speaking are referred in Appendix 4.

3.11. Data Analysis

In the beginning, all scores were entered into SPSS 19.0 (Statistical package for the social sciences) and the descriptive statistics for each groups’ performance on the two assessments tasks of the pre-test, post-test were computed. Means and standard deviations were computed in order to collect data on the central tendency and variability of each group’s score on each assessment task. Groups’ mean scores of the proficiency test were submitted to Independent Sample t-test to make sure that the students in the groups were not significantly different in terms of language proficiency and subsequently a number of outliers were removed from the study. Next, in order to find out if web-based collocations instructions had any effect on learning outcome, the independent Sample t-test for assessment of web-based collocations instructions was given. In continue, Independent Sample t-test was used for pre-test and post-test scores on collocational knowledge, essay writing and speaking skill.

3.12. Summary of the Methodology

In this Chapter, the exact characteristics of participants, the type of sampling, treatment and measurement instruments and methods of scoring the data for both the quasi-experimental study and the survey were discussed in detail. In brief, the
participants in the quasi-experimental study consisted of 65 Indian ESL students aged 18-21 studying in the JSS College for Women in Mysore, India.

The type of sampling was convenience sampling, which is the most common type of sampling in SLA studies and the assignments of classes into different treatment groups and the control group was done on a random basis. The treatment tasks include web-based collocations instructions and the measurement instruments consisted of collocational knowledge, essay writing and speaking which were used in the pre-tests and post-tests. The reliability and validity of the instruments were established prior to the study and the classes were also made homogeneous in terms of linguistic proficiency based on a proficiency test for intermediate levels, which was administered before the treatment started. The data for collocational knowledge test coded by a second competent rater to ensure the inter-rater reliability. The aim of this method is nothing but to help the students who can elevate their writing and speaking proficiency through learning collocation. Despite the fact that there are numerous opinions by teachers and scholars about the acquisition of collocations by EFL/ ESL students who come from different cultural backgrounds in several countries and very few studies have explained the influence of collocational knowledge. As demonstrated in this chapter, web-based collocations instructions taught to the experimental group to watch whether teaching them affect their style of writing and speaking. Through a set of lessons proposed at teaching collocation by providing instances that assist in raising students’ awareness. In addition as stated in previous part knowledge of collocation plays a significant role in native-like accuracy and fluency of ESL students in speech and writing, and it also impacts their comprehension in reading and listening.
In Chapter 4, the results of both studies will be analyzed and presented. For the quasi-experimental study, the mean scores and the standard deviations of different treatment classes, and the control group in pre-tests and post-tests will be tabulated and relevant statistical tests will be conducted to find out if the findings are statistically significant. With regard to the survey, frequencies of responses to different items, along with expected frequencies and relevant statistical tests will be displayed in tables. When necessary, the findings of both studies will be illustrated through figures.