

CHAPTER THREE

Research Methodology

3-0 Introduction:

This research will specify the features and description of the problem that Sudanese Arabic speakers encounter when they speak English, thus, it will be of descriptive and analytical type. This research is limited to Sudan University of Science and Technology. The data has been collected from 20 students (third level) of SUST, College of Languages. Samples of their pronunciation were observed in which some notes were written about their pronunciation from reading test. A structured questionnaire to be answered by the university teachers to write their opinions and ideas about the exact reasons that make SUST students mispronounce some English sounds, and suitable ways that help them improve their pronunciation. All the data were analyzed later on analytical and descriptive basis. For calculating the validity and the reliability of the questionnaire different methods were used. This is described in detail in the discussion section of the whole study.

3-1 Population of the Study

The original population of this study was the Sudanese Arabic speakers they study English language at all the Sudanese universities and schools.

3-2 Sample of the Study

The sample of this study contained two parts; the first part was (20) of the students who were chosen from Sudan University of Science and Technology SUST second level students. (20) Students were chosen to do the reading test for the study test.

The second part of the sample was (30) of English teachers. The teachers responded to questionnaire on the exact sounds which the students mispronounce and the reasons for pronunciation problems facing the students at SUST. The researcher followed the descriptive and analytical method in this study. The descriptive researches attempt to describe the problems and the phenomenon as it is i.e. describes the phenomenon and explains it. Then offer the recommendations for solving the problem. Also the analytical method was used in this study, to test the hypotheses of the study by using suitable statistical procedures.

3-3 Tools of Data Collection

It is known that the tool of any study is the instrument which any researcher uses for collecting the required data for the study. There are many types of tools used in the field of scientific research. In this research, the researcher depended on observation to collect the data from the sample of the students. On the other hand, a structured questionnaire was used to collect the information from the sample of the teachers. The questionnaire contained three hypotheses reflect the opinions of the teachers about the pronunciation of some SUST. In the questionnaire each teacher was asked to choose one answer according to the Tri Regression Measurement, which contains three levels (agree-not sure-disagree).

3-4 Statistical Reliability

Reliability refers to the reliability of any test, to obtaining the same results if the same measurement is used more than one time under the same conditions. In addition, the reliability means when a certain test was applied on a number of individuals and the marks of every one were counted; then the same test applied another time on the same group and the same marks were obtained; then we can

describe this test as reliable. In addition, reliability is defined as the degree of the accuracy of the data that the test measures. Here are some of the most used methods for calculating the reliability:

Alpha-Cronbach coefficient.

On the other hand, validity also is a measure used to identify the validity degree among the respondents according to their answers on certain criterion. The validity is counted by a number of methods, among them is the validity using the square root of the (reliability coefficient). The value of the reliability and the validity lies in the range between (0-1). The validity of the questionnaire is that the tool should measure the exact aim, which it has been designed for.

In this study the validity calculated by using the following equation:

$$\text{Validity} = \sqrt{\text{Reliability}}$$

The reliability coefficient was calculated for the measurement, which was used in the questionnaire using Alpha-Cronbach coefficient Equation as the following:

For calculating the validity and the reliability of the questionnaire from the above equation, the researcher distributed the questionnaires to 30 respondents to calculate the reliability coefficient using the Alpha- Cronbach coefficient; the results have been showed in the following table

Reliability Statistics

Cronbach's Alpha	N of Items
.79	12

3-5 Validity

Validity coefficient is the square of the reliability coefficient so reliability coefficient is 0.79, and this shows that there is a high sincerity of the scale and that the benefit of the study.