

CHAPTER 3

METHODOLOGY

3.0 Overview

This chapter contains a description of the methodology used in this study. It presents the research design, the participants, and the data collection and analysis procedures.

3.1 Research Design

The present study employs the survey as its main data gathering method. Wiersma (1995:169) states that “the survey research is probably the single most widely used research type in educational research”. Many surveys are conducted in education through instruments such as questionnaires, interviews, published tests or inventories (Wiersma, 1995).

In this study, King Khalid University female undergraduate students were selected randomly as representing Saudi female undergraduates. The data was collected in semester one of the academic year 2003/2004. Eight intact classrooms were involved in the study. They consisted of two classes from each Department i.e. Computer Science, English Language, Medicine and Biology; one class was from the first year and the other class was from the second year. Since the Female Centre had only been established recently, courses were only offered for the first and second year levels. As such, participants were restricted only to the first and second year undergraduates. Each class contained 20 to 40 students except for the second year Biology students who were about 60 students. This larger number was due to the lower grade required to enroll in Biology Department, making it possible for more students to obtain a place. To major in Biology, students only needed to score 80% in contrast to Medical, Computer Science

and English Language students who needed a much higher grade. The reason for selecting two classes only from each department was due to the limited number of classes available for some years of study in some departments, such as the English Language, Medicine and Biology Departments; they all had one class each, for each year of study. On the other hand, the Computer Science Department had two classes for the first year and one class for the second year. Every student was required to respond to the same questionnaire; the Strategy Inventory for Language Learning (SILL). No variables were manipulated as they were studied as they existed in the situation. The data was analysed using the Statistical Package for Social Sciences (SPSS) Version 10. The statistical procedures involved:

1. Obtaining descriptive statistics such as frequencies of major field of study, academic level and proficiency level.
2. Comparing means using Analysis of Variance (ANOVA). ANOVA is a statistical procedure that proved to be the most effective and dominant method to analyse situations in which there are several independent variables. ANOVA tells us how these independent variables interact with each other and what effects these interactions have on the dependent variable (Willson, 1988).
3. Determining where significant differences lay using the Scheffe, which is a standard post-hoc test that is valid and sufficiently generalized to be applicable.

3.2 Participants

The participants in this study were 264 female undergraduate students from King Khalid University, Saudi Arabia. Their ages range between 18 and 20. They were from different departments and were enrolled in Level One and Level Three in the English language intensive courses. Students in Level One were first year students and were at

the beginner level of English proficiency while students in Level Three were second year students and were at a high intermediate level. Table 3.1 presents a detailed profile of the subjects from whom the data was collected.

TABLE 3.1

Subject Profile: Major Field and Year of Study (N=264)

Major	First Year	Second Year	Total
Computer Science	26	20	46
English Language	37	43	80
Medicine	25	21	46
Biology	32	60	92
Total	120	144	264

Table 3.1 shows that the group sizes for first and second year were different due to the differences in classroom sizes and availability of lecturers. The University sometimes has shortage of lecturers for some departments. Thus, students have to be grouped in large classes. Furthermore, the number of students in different major fields of study is not the same due to the specified score required for the enrollment in different departments.

3.3 Data Collection Procedures

Data gathering procedures involved using a variety of measures to collect both qualitative and quantitative data. The techniques for eliciting information employed were: questionnaire survey, interview, observation and achievement test.

At the initial stage, two data collection techniques were piloted to help identify potential problems in the overall research design. First, in the piloting stage of the questionnaire survey, six students were involved as participants for testing the appropriateness of the questionnaire. Many points had been checked such as the time required in completing the questionnaire, and the clarity and ease of both of the instructions and the questions. Students took thirty minutes to fill in the questionnaire. No modifications in the instructions or the language were required, as everything was clear to the students, except the addition of some questions that elicit students' background information. Second, in piloting the observation, the researcher focused on one English language reading class to get a comprehensive picture of learning strategies used. The class contained 25 Medical students. The observation took about fifty minutes. As audio and video tapes were not allowed to be taken to the classroom, the researcher decided to use note taking in recording strategy use to obtain the data, but later found that combining the use of an observational scale with note-taking could provide more accurate data.

3.3.1 Questionnaire

Questionnaires are widely used for surveys. They are the most appropriate and the most useful for data-gathering if properly constructed and administered (Best and Kahn, 1993). A self-reporting questionnaire was used to identify the English language learning strategies used by EFL undergraduate students (See Appendix A). This questionnaire was designed by Oxford (1990) and called the Strategy Inventory for Language Learning (SILL). No modifications were required except the addition of some questions that elicit students' background information such as the student's number, age, major field of study and nationality. This questionnaire is built on some of the earlier classifications of learning strategies such as Rubin's (1981) and O'Malley et al.'s (1985) classifications and provides a more comprehensive and detailed taxonomy than

the rest of them. The SILL is a structured survey that has two versions: one for native speakers of English (80 items) and another for learners of English as a second or foreign language (50 items). These two versions have been used as the key instruments to assess the use of learning strategies in many parts of the world, with learners speaking many different languages. SILL is an instrument that has been checked for reliability and validity. It has been extensively tested by Oxford, her associates and graduate students in both ESL and EFL contexts (Kaylani, 1996). The version of SILL that is used in this study is designed for learners of English as a second or foreign language and contains 50 items. It has a Likert-scale format where learners are asked to report how often they use each of the 50 strategies on a scale of one to five. The choices are: Never, Almost Never, Usually Not, Somewhat, Usually, Always or Almost Always. The questionnaire consists of six parts, each designed with a specific purpose. Part One aims at securing information about memory strategies used by students. Part Two focuses on cognitive strategies and mental processes that take place in learning the English language. Part Three, investigates the compensation for missing knowledge strategies used by students. Part Four specifies the meta-cognitive strategies students use to organize and evaluate their learning. Part Five focuses on affective strategies and how students manage their emotions. Part Six identifies the social strategies that students use in learning with others. The overall average indicates how often the learner tends to use language learning strategies in general while average for each part of the SILL indicates which strategy groups the learner tends to use most frequently.

The self-report questionnaire was administered to 246 students from different Departments: Medicine, Computer Science, English Language and Biology. Those students enrolled in level one and level three in the English language intensive courses. A brief explanation of the purpose of the study was given to the students by the

researcher. The students were given thirty minutes to complete the questionnaires and were informed that their responses to the questionnaires would be kept confidential and would have no effect on their course grades. The completed questionnaires were collected right after the subjects completed them.

3.3.2 Interview

Interviews were used as the secondary research tool (See Appendix B) to supplement data gathered from the SILL and data obtained from observations. The interviews were conducted with only 32 students out of 264 (12%). This small students' number was due to the time constraints for both the students and the researcher. Sixteen students were used from the first year and sixteen from the second year. Eight students were chosen from each Department: Computer Science, English Language, Medicine and Biology to be interviewed. Those students were among the same students who participated in the SILL.

Semi structured interviews were conducted with EFL undergraduate students. The researcher chose this type of interviews as they allow elaboration in either the questions or the answers but within limits. Students were arranged in one group for two-hour interviews, which were conducted in the English language by the researcher. Topics were selected in advance but the researcher decided the sequence and wording of the questions during the interview. Each of the thirty-two students was given the opportunity to voice her opinions on the following main topics:

1. Students' interest in improving their proficiency in the English language.
2. Strategies used for memorizing new words.
3. Strategies used to overcome obstacles to communication.
4. Strategies used in understanding any reading passage.

5. Students' interest in reading for pleasure in English.

As audio recording is not allowed in the Female Centre, interviews were recorded in writing during the interview. The manner in which the questions were asked and the setting encouraged the students to relax and provide accurate and honest answers.

3.3.3 Observation

Observations were conducted to obtain qualitative and quantitative description of the English language learning strategies used by EFL undergraduates in the four language skills. Data obtained from observations was triangulated with the data obtained from the SILL and interviews. Three factors were considered in planning the observation sessions: first, the number of observers and the number of students observed, second, the frequency and duration of the observations, third, the way of collecting, tabulating and analysing the observational data.

The first factor concerns the number of observers and the number of students observed. With regard to the number of observers, the researcher chose to observe the language learning strategies alone because of some scheduling problems. Most of the instructors had full timetables. They were either teaching or observing the students who were taught several courses such as Computer, Islamic studies, Medicine and Arabic through closed - circuit television by male lecturers. Another reason for conducting the observations alone was the difficulty expressed by some instructors in producing accurate descriptions of the students' strategies used.

As for the number of students observed, the researcher focused on four entire classes of first year students from all Departments: Computer Science, Medicine, English Language and Biology. Each class contained 20 to 40 students. These students are

among the 264 students who completed the questionnaire. Observations were confined to first year students due to some scheduling problems. Observations were not recorded on either audiotape or videotape due to the restrictions applied in the Female Centre. Non-participant observation was used in the study to help the researcher get a more comprehensive picture of the learning strategies used. Thus, the teaching was conducted by the students' actual instructors and the observations were carried out by the researcher who recorded in writing, as an outsider, all the strategies that were used. The researcher made no effort to manipulate variables or control the activities of individuals but simply observed and recorded the events as they naturally happened.

With regard to the second factor, the frequency and duration of the observations, the researcher observed the classes for nine sessions due to time constraints. Teaching of each of the following skills - reading, writing, listening and speaking- was observed three times. Keeping in mind that the teaching of listening and speaking was used to be integrated in one period. Each observation session took about fifty minutes. The data collected from the observations was limited due to the following drawbacks of the observational method:

1. All mental strategies are unobservable.
2. The inability to produce descriptions of the introvert students who do not participate during the class session.
3. As classrooms are teacher directed, students have few opportunities to engage in active learning with observable strategies.

Finally, with regard to how the observational data is collected, tabulated and analysed, the researcher used an observation scale (See Appendix C) that lists all the strategies used by EFL students with the four language skills, and then counted the occurrences of

each one. In addition, note-taking was used in giving examples of some of the classroom activities that included the use of learning strategies with each skill (See Appendix D). As such, the observational data is collected in a structured form and supplemented by unstructured open observations.

3.3.4 Achievement Test

Among the many factors that might influence a language learner's choice of strategies is the learner's achievement level in the English language. Therefore, an achievement test was administered to 60 students to investigate the influence of achievement level on strategy use (See Appendix F). The results of each of the sixty students were compared with the strategies students used according to their answers in the questionnaires. As students at King Khalid University were placed in classes according to their majors, a large number of second year Biology students were grouped in one class due to the shortage of lecturers in the Biology Department at that time. The researcher chose these 60 Biology second year students to be tested as they were the largest group who were gathered in one class. Another reason for choosing this group of Biology students was due to the difficulty in convincing the students in other departments to write their names or their students' numbers on the questionnaires to be compared with their achievement test. According to them, writing names means the results of the study would be individually identified. Second year Biology students were the only group who were convinced that they would not be identified individually in the results of the study. The test was designed, administered and marked by the English language instructors assigned by the English Language Department to teach Biology students the four language skills. It was checked for its validity by an expert in TESOL as is the usual practice at King Khalid University. It was administered at the end of the semester and is similar in format to the students' usual final exams. The test lasted three hours. Students

were advised that responses would not affect course grades and were urged to do their best. The test consisted of four parts, listening, speaking, reading and writing. One hundred marks were allocated to the test as a whole, divided equally between the four skills. Table 3.2 illustrates the grading scale used to assess the students' achievement level.

TABLE 3.2
Grading Scale for Achievement Test (GSAT)

Mark	Grade	Description
90-100	A	Excellent
80-89	B	Very Good
70-79	C	Good
60-69	D	Pass
0-59	F	Fail

3.4 Data Analysis Procedures

Upon completion of the pilot study, preparation for the main study started. As the objective of this study was to provide a holistic description of EFL learning strategies, analysis of the data consisted of synthesizing the information obtained from the questionnaires, interviews and observations. Furthermore, descriptive statistical procedures were employed for data analysis such as scores, means, percentages and frequencies. Upon getting the means from the descriptive statistical procedures by using SPSS, Oxford's (1990) key averages were used in the analysis of these means. Table 3.3 shows the keys used to describe the most frequently used strategy or group of strategies among EFL learners.

TABLE 3.3**Key Averages (Oxford, 1990)**

	How Often Is the Strategy Used	Mean
High	Always or almost always used	4.5 to 5.0
	Usually used	3.5 to 4.4
Medium	Sometimes used	2.5 to 3.4
Low	Generally not used	1.5 to 2.4
	Never or almost never used	1.0 to 1.4

In making a decision about the hypothesis, 5 percent of the area in the sampling distribution was designated as the rejection region for the hypothesis, and the level of significance was therefore set at a $p < 0.05$. In other words, the hypothesis is rejected at the 0.05 significance level, which means that hypothesis has a 0.05 probability of being wrong. Significance values from multiple comparisons of the means were determined on the basis of ANOVA. It has the advantage that it can be used to analyse situations in which there are several independent variables. It describes how these independent variables interact with each other and what effects these interactions have on the dependent variable. The Scheffe, a standard post-hoc test was used to determine where specific significant differences lay. It is a method of multiple comparisons. It is usually used with ANOVA to specify which variable among several independent variables is statistically the most different.

Having determined the methodology used in the assessment of language learning strategies, described the subjects who participated in the study and the data collection and analysis procedures, the following chapter will present the findings obtained from the analysis.