

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.0 INTRODUCTION**

Chapter three sets out to describe various research approaches employed in the research. This chapter discusses the two main approaches used in the classroom research: qualitative and quantitative approaches. Background information on the nature of the samples (subjects) involved in the research project and, the data collection instruments used for the research are also discussed. Finally, the limitations of the study are also presented in this chapter.

#### **3.1 APPROACHES TO RESEARCH**

##### **3.1.1 Qualitative and Quantitative Approaches**

The study will include both the qualitative and quantitative research methods primarily making use of interviews, questionnaires and classroom observations. Salvia and Ysseldyke (1991:518) point out that one of the basic approaches to qualitative research is ethnographic observation. Ethnographic observation is when the researcher observes the phenomena, such as people's behaviour in a natural setting without interfering. In other words, one of the main objectives of ethnographic observation is, according to Watson-Gegeo (1988:576), "to provide a description and an interpretive-explanatory account of what people

do in a setting, the outcome of their interaction, and the way they understand what they are doing". While qualitative analysis allows us to study individual performance closely, it may or may not represent the behaviour of other learners and is therefore questionable value for generalization to language acquisition by others (Shulman, 1981). He also purports that when our interest is in the normative acquisition behaviour of a population, quantification represents a reality for that group. Such a reality may be generalized to other groups, assuming that sampling procedures are accurate.

Quantitative approaches require special instruments for data collection and analysis. Special care is needed to define or select representative samples and participants. The quantitative approach is controlled, objective and product-oriented. Kamil et al. (1985) claim that descriptive research will be quantitative while qualitative is not.

### **3.1.2 Triangulation**

Many researchers advocate a combined approach or triangulation in order to avoid any discrepancies (Allwright and Bailey, 1991). It is favourable because not all data can be measured with numbers and numbers alone cannot interpret the whole situation. Interpreting qualitatively is also subjected to scrutiny because of its subjectiveness. Thus, to counterbalance this problem, many researchers propose a combination of methods of methodology, data or theory (Chaudron, 1986).

Classroom research focuses on what actually happens in the classroom, such as classroom interaction and this relates to both teaching and learning. This kind of research can lead to the use of a variety of methods such as classroom observation, audio and videotaping, interviews and questionnaires. According to Allwright and Bailey (1991), there are four uses of triangulation : the use of *data triangulation* refers to using many different sampling strategies, *theoretical triangulation* sets out to confront the data analysis from different perspectives, *methodological triangulation* which is the use of different methods of collecting data and *investigator triangulation* where more than one observer or researcher contributes to the findings.

According to Seliger and Shohamy (1990), conducting qualitative research in second language acquisition presents unique problems to the investigator as the language itself may become a variable. As a non-participant observer, research of this type seeks to describe what is occurring and what it means to be a participant in an activity such as acquiring another language. The researcher must therefore infer and extrapolate to a greater extent than in any other kinds of qualitative research in order to arrive at as accurate a description as possible.

The main objective of this present study is to identify learner difficulties in the context of group work and a variety of methods for data collection were used. They included classroom observations and questionnaires (students and teachers).

### **3.2 The Subjects**

The targeted subjects consisted of 12 students in four groups of three students each. The students were randomly selected from an intact class of 30 Form 4 students of Kelana Jaya Secondary School, Petaling Jaya. The subjects were chosen because the study aimed to discover learner difficulties in carrying out group work in a language class. The subjects comprised above - average ability learners. A sample of four groups of three students each would be an ideal number for observation purposes. It would have been difficult to observe and record interaction of all students in a class of 30 students, therefore observations of two of the groups were done for two consecutive lessons, followed by observations of another two groups for the successive two lessons. The school has a balance of Malay, Chinese and Indian students. The medium of instruction in the school is Bahasa Melayu with English taught as a second language. The location of the school is in the urban area, and the students are mainly from the middle-income families. The sample group of 12 students represents a random/block sampling from one class of Form Four students of the Kelana Jaya Secondary School, all of who are in the age range of between 16 – 17 years. The researcher at present teaches the English Language subject to this sample group and therefore finds it convenient to collect data through classroom observations and questionnaires.

### **3.3 Data Collection Instruments**

Classroom observations, which included video recordings of students' participation during group work, formed part of the data. These recordings were



useful for the purpose of analysis, which were obtained from the interactions that occurred when students carried out the assigned activities. The study also made use of semi- structured questionnaires. These instruments were chosen so that the findings could be triangulated.

### **3.3.1 Questionnaires**

A questionnaire was used to look into learners' attitudes towards English Language learning and methodological preferences (refer to Appendix 5). The questionnaire assessed learners' generalized preference for classroom environments, as well as the learners' attitudes toward the use of cooperative learning method through which they had participated in their group work activities. A prospective course survey was distributed to all the 30 Form 4 students, though only the data collected from the four groups of three students each were analyzed statistically on a commonly used analogue scale, that is Likert's technique for measurement attitude. The questionnaire was constructed to capture changes in learner perceptions on five variables:

- achievement of the subject matter;
- enhancement of interpersonal skills;
- enhancement of decision making skills;
- attitude toward method and
- attitude toward group work.

Questionnaires are efficient means of data collection. They enable the researcher to collect data in field settings and are useful for quantification. The questionnaires can mainly be quantified and a fairly simple descriptive statistical analysis would be used to measure frequency. The results extracted from these questionnaires would prove useful as they would provide background information about the students in terms of age, language proficiency, and most important of all, problems related to the issue of learning difficulties in group work.

Teachers were also given a set of open-ended questions to discover their views regarding group work and cooperative learning in class. This questionnaire would be beneficial in the further clarification of the issue of learner difficulties in group work.

### **3.3.2 Classroom Observations**

Observations can either involve participation or non-participation. The former means that the researcher is a member of the discourse community in which she is observing and the latter implies that the researcher is an outsider to the community. As the present researcher is a member of the community where the research was carried out, she had thus collected a sample of the population that she was familiar with, and carried out participant observation in the classroom. Participant observations required close, long-term contact with the people under study. The observer's function was limited to gathering information only. She also enlisted the aid of a second observer to validate the observations

obtained on the checklist given in the appendix (refer to Appendix 4) The classroom observation enabled the collection of data, as well as video recordings of students' participation during the observation period made. These recordings were used as back up for information recorded on a checklist for the purpose of analysis of interaction. The research was an observational experiment with the intact group of 12 subjects in one class.

The observation checklist (Appendix 4) is based upon a category system developed by King, Tayler and Maloney (1991) in their study on small group cooperative learning. The study focused on the interpersonal dynamics prevailing among students within a group and the task was to gather data of small groups at work. The data was then used to develop a categorical and analytical system that could be used to describe the nature and patterns of student cooperation in small group learning situations.

The framework for the category system established is as follows:

- Whole class introduction
- Group task;
- Group dynamics; monitoring of group or whole class; and
- Whole class wrap-up.

As the research was a structured observational experiment, the data was gathered over a period of time, using the data checklist above to record information.

Analysis of categorical data was then performed on the frequencies of subjects in each category, to indicate whether there was cooperation and collaboration during the group work activities or if any of the moves in any of the four categories above (see Appendix 4) were carried out.

The classroom observations (see Tables 4.5 and 4.7) were generally interpretive of naturally occurring interactions, and these interactions were transcribed to document and interpret how students and teacher(s) used language, covert behaviours e.g. eye to eye contact, and how interactive students were during group work whilst using the cooperative, collaborative learning technique in the language classroom.

Hence, the research outcomes of the present research were applied and evaluated through the videotaped classroom observations. The behavioural observations also enabled the researcher to record verbal and non-verbal behaviours of individuals in a group while carrying out an activity. The observations focused on speech and actions of the members of the group. Tape recordings of interactions amongst the students provided back up to the observation data, which were then analysed to indicate whether the interactions enabled students to successfully complete the task and also to identify the difficulties of the language learner while completing the task.

### **3.4 Course Design**

The cooperative learning orientation entails a paradigmatic shift from the transmission model of teaching to a process-oriented, participatory model, seeing learners as active agents in their learning. With this technique, the researcher believes that students will be able to develop their language particularly through language socialization. The cooperative learning approach relies less on teacher-directed teaching and more on cooperative group work activities. The teacher's role is to share the responsibility for managing and monitoring both interaction and learning with students. The classroom tasks involve information sharing, cooperative reasoning, opinion sharing and values clarification. The teacher coordinates group activities, provides clarification, feedback and motivational support (Hyland, 1991:85-92). The researcher sets out to observe interactions such as the negotiation of meaning, information sharing, cooperative reasoning, opinion sharing and values clarification whilst administering the cooperative technique of learning through these tasks. The language activities chosen will be interactional in nature and as close as possible to students' interest.

Finally, a series of tasks specifically chosen for these Form 4 students were used to encourage and help these students in dealing with language group work activities, which in part used the cooperative technique of learning (refer to Appendixes 1, 2 and 3). Observations of these classes were then recorded on a checklist (refer to Appendix 4) and video recordings made.

### 3.5 Procedures

The groups for observation remained constant over a period of two sessions. In each session, the researcher observed only two groups at a time, the main reason being, it was easier for the researcher to focus on the particular groups that were being observed. The main focus of this research was to look out for the difficulties of the learner while working in a group, thus every observable behaviour of the learner to show this needed to be detected, whenever possible. The researcher had to be near the students so that all interactions could be heard and recorded on video. Students in each group were allocated a number for easy identification and this was used to track interactions among the group members during each of the sessions. The video recording of the sessions was transcribed and student interactions were analysed according to the **Categories of interaction checklist** (refer Appendix 4) and **Classroom observation checklist** (refer Tables 4.5 and 4.7) adapted from King, Tayler and Maloney (1991).

Besides the above procedures, each student was also given a questionnaire (refer Appendix 5), consisting of a survey of their attitudes and problems concerning group work, after the group work activities had been carried out. The questionnaire data were to be used to assist in interpreting the results of the group work sessions carried out. A total of ten morning session teachers teaching the English Language in the school were also given a questionnaire to find out their views on the appropriacy of group work activities (refer Appendix 6). It is hoped

that the teachers' views will shed a better understanding of the teaching and learning situations in the context of using group work in classroom teaching.

During the lessons, students were given a set of tasks and activities that involved speaking, reading and writing skills. The materials and tasks handed to the students are shown in Appendixes 1, 2 and 3. The students were required to cooperate and collaborate with their group members while carrying out the tasks assigned to them.

Data coded against variables on the category system were assigned codes to indicate the particular group and its individual group members. For example, the four groups were categorized as **G1, G2, G3 and G4**. The three individual members from each group were categorized as for example, in group **G1 (Group 1)**, **S1** is for student number 1, **S2** is for student number two and, **S3** is for student number three. The groups were then given tasks/activities based on a worksheet, which includes a set of instructions, and directions that the student has to follow. All the lessons observed took up two periods which consisted of forty minutes per period. For an eighty-minute time slot, groups of three students each in a class of thirty worked through the worksheet that had been prepared by the teacher for forty-five minutes and convened during the last twenty-five minutes in a feedback session and plenary.

In the first session, the students were given a lesson that involved reading a short story titled "The Pearl" by John Steinbeck followed by a writing activity where they had to write the plot of the story (refer Appendix 1), in their respective groups. This lesson took eighty minutes of class time. The researcher observed groups G2 and G4 in this session.

In the second eighty-minute session with groups G1 and G2 under observation, the students were required to carry out an activity that was called "Chain Story Task 1" (refer Appendix 2). In this activity, the students were involved in continuing a chain story. Each group's task was to contribute one line (when their turn comes) to continue the story written by another group. Each group was given a theme, for example, G1's theme is "Horror" and therefore, each time the group contributes a line, they have this theme in mind. Each group is required to contribute six sentences.

In the third eighty-minute session, groups G3 and G4 were observed. In this session, the students were asked to follow up with the second activity called "Chain story Task 2" (refer Appendix 3). Each group was required to work on the story that had been constructed earlier in the first session by editing the story (spell check, language/grammar and thesaurus), adding sentence connectors/conjunctions where necessary and adding sentences where appropriate, to bring out the theme of each group. Each group was to give their story a title. The group members were asked to elect a spokesperson for the group to tell the story to the



class. The teacher then gave feedback and comments regarding the contributions of each of the group.

In each of the sessions, the teacher gave instructions on how the task was to be carried out and acted as facilitator by going around each group, providing assistance or explanation, only when required. The researcher remained close to the groups to record their interactions. However, the researcher explained to the students that she was there only to record what was observed in their groups as they interact with each other while carrying out the tasks and that the recording was meant only for research purposes. This was so that the students would be more at ease and not too conscious of the camera.

The students were given a questionnaire (refer Appendix 5), of their attitudes towards group work and English Language learning in general after the tasks/activities were carried out. Teachers teaching the English Language in the morning session were also given open-ended questionnaires (Appendix 6) to find out their opinions regarding the appropriacy of group work in their language class.

### **3.6 Limitations of the study**

This study and the discussion of the results are exploratory. The results may be interpreted in different perspectives. As this is a partial dissertation, only a small sample size and intact group of subjects were used. Hence, results obtained

cannot be generalized to a larger population as the study was confined to a single ESL classroom. In addition, the presence of a video camera initially unbalanced the smooth running of the lesson during the first instructional class. The students were observed as nervous and shy when the camera was focused on them and thus, could not react naturally to the lesson and teacher, especially during the first video recording. The researcher assured the students that the reason for her presence was for research purposes only and the students were observed as more relaxed in the subsequent sessions.

The limitations of the study are as follows:

1. The classroom observations were conducted over a period of five weeks. The students were observed working in their groups during their double English Language periods conducted once a week. Each period amounts to forty minutes. This however, did not weaken the objective of the study as the bulk of the data produced many interesting findings.
2. The video camera recorded only observable behaviour. Thus, the subject's intentions and attitudes had to be inferred by the researcher. However, the validity of the research is not reduced as these were backed up by the results of the questionnaires and interviews.