CHAPTER 3

METHODOLOGY

This study was a piece of an action research to investigate the effect of semantic mapping to enhance reading comprehension in a Form 6 English Language class. According to Henry and Henry (1982) action research aims at improvement in practice, improvement in the understanding of the practice by practitioners, and improvement of the social situation in which the practice occurs. In essence, action research is the teachers' research, in which the teachers make it a point to bring about changes because they feel responsible for the development of their classes. This chapter gives the background information and the description of the school in which this study was located, the students who participated in the study, the teaching-learning materials used as well as the procedures adopted in data collection and analysis.

3.1 The School

This study was located in Sekolah Menengah Kebangsaan Taman SEA, which is one of the premier schools in Petaling Jaya. 85% of the population is Chinese, 7% Malays, 7% Indians and 1% others. The total population of the school comprises 2176 students. There are a total of 38 classes in the morning session with 10 form six classes. There are five lower six classes and five upper six classes. They make up a total of 211 students. Most of the students come from middle income families in the vicinity of the school. The school has successfully maintained a passing rate of 100% in the 1997 and 1998 STPM exams. This school was rated the top school for STPM in Selangor in 1998 with five students getting 5 A's.
3.2 The Action Research Study

This investigation into the use of semantic mapping to improve reading comprehension among Form 6 students used action research. In this section I will provide the definition of action research, the aims of action research, and the process of such a research. This section also comprises the descriptions of the student informants, the English lessons, the exam paper, the materials used in teaching, as well as the stages in action research. It is concluded with the description of the three data collection methods.

3.2.1 The Concept of Action Research

Action research is a deliberate and solution oriented investigation that is conducted by individuals or groups of people. The concept of action research can be traced back to the early works of John Dewey in 1933 and Kurt Lewin in 1940’s. Corey (1953) defined action research as the process through which practitioners study their own practice to solve their personal practical problems. Action research is a collaborative activity where teachers can work together to help one another design and carry out investigations in their classrooms. According to Elliott (1991), action research is concerned with the everyday practical problems experienced by teachers rather than ‘theoretical problems’ defined by pure researchers within a discipline of knowledge. Action research “allows people to understand themselves better, increases their awareness of problems, and raises commitment” (Bogdan & Biklen, 1992, p.227).

Stenhouse (1975) felt that teachers could improve their teaching practice because action research has

the outstanding characteristic of the extended professional self development through systematic self-study, through the study of the work of the other teachers and through the testing of ideas by classrooms procedure (p. 144)
The aim of action research is to improve our teaching practice and teachers can do just that by becoming more critical and reflective about their practice. The beauty about action research is that it is the teachers who want to make the changes in their classrooms in a very deliberated, informed and systematic way. Lawrence Stenhouse (1975) once said “It is the teachers who, in the end, will change the world of the school by understanding it” (cited in Rudduck, 1988, p.76). Action research allows teachers to make the change as and when it is deemed necessary. Cruickshank (1981) defines action research as reflective teaching, “as the teacher’s thinking about what happens in classroom ideas, and thinking about alternative means of achieving goals or aims” (cited in Altan, 1997, p.8). The goal of action research is to understand the world of our students. As Bogdan and Biklen (1992) mention “the qualitative approach requires researchers to develop empathy with people under study and to make concerted efforts to understand various points of view” (p. 219).

The action research process is initiated by identifying the puzzling problem, which emerges from a period of observation and reflection. The next step is collection of data through investigation to find out what is happening in the classroom. A hypothesis is formed and the next step is developing some form of intervention and then it is evaluated. Then if necessary there is further planning and the steps are repeated. It involves a self-reflective spiral of planning, acting observing, reflecting and re-planning. This procedure is depicted in the diagram in the following page devised from a model by Nunan (1992), and McNiff (1988). The diagram summarizes the research procedures that were carried out for the study.
Figure 1: Model of Action Research Procedure

<table>
<thead>
<tr>
<th>STEP</th>
<th>PROCEDURE</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>1</td>
<td>Identification of problem</td>
<td>Why students were weak in reading comprehension</td>
</tr>
<tr>
<td>2</td>
<td>Fact finding</td>
<td>Use of questionnaire to find reasons for weakness.</td>
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</table>
| 3    | Analysis of data | Reasons for problems:  
  i. Too many unfamiliar words  
  ii. Time limit too short |
| 4    | Hypothesis | Students lacked vocabulary skills  
  Students spent too much time looking up words in the dictionary |
| 5    | Plan Intervention I | Provided a vocabulary list  
  Action I: Field notes  
  Monitor  
  Observe (unable to answer questions)  
  Reflect Students unable to link ideas or comprehend text well |
| 6    | Plan Intervention II | Use of leading questions to activate prior knowledge  
  Action II: A lot of discussion- able to answer some questions but too much guesswork.  
  Monitor  
  Observe  
  Reflect Limited background knowledge, unable to comprehend some ideas. |
| 7    | Plan Intervention III | Provided necessary information to bridge the old and new information using semantic maps  
  Action III: Students able to link ideas in the passage that contribute to main idea.  
  Observe  
  Reflect Students able to map out ideas on their own and answer all the questions. |
3.2.2 Student Informants

In order to investigate the effect of the use of semantic mapping to enhance reading comprehension I selected key informants from my Form 6 English Language class. Four students were selected as key informants for the study from a pool of 15 students who are taking the 914 English Language paper in the STPM examination. This sixth form Arts class, 6 Atas Bidara comprised 26 students of whom 15 took this English paper while the remaining 11 took the Bahasa Melayu paper. English and Bahasa Melayu were taught at the same time. The criteria for selection were to achieve the representation of the general features of the class in terms of gender, ethnicity and language proficiency in English. As a result four students were selected after an initial observation and based on the mid year exam results. The students in this study were a Malay boy (S1), Indian girl (S2) and a Chinese boy (S3) and a Chinese girl (S4). The students S2 and S4 were highly proficient in English Language as they both scored A, S1 obtained a B and S3 obtained a grade D. However, for the purpose of the study, classroom intervention was based on group work so there was no test of individual scores. All four students were highly motivated to learn English as they had voluntarily opted to take the paper as an option and they were aware of the importance of English especially for future academic needs.

3.2.3 The English Language Lessons

The class had four double periods of English per week. Each lesson was a double period lasting 80 minutes. The total amount of time allocated for the subject was 320 minutes per week. The students were taught all four skills, listening, speaking, reading and writing by the same teacher. Students had to sit for all four papers of which speaking was tested much earlier. There was no single text prescribed for teaching, therefore, the teacher had to source
materials from a variety of books, magazines, newspapers and other resources. Reading comprehension was taught every week through which the other four skills were also taught and learnt. Most of the time lessons taught were discursive in nature where students participated very actively. Pair work and group work were often used to help students learn cooperatively and they learnt a lot through peer contact.

3.2.4 The English Language Paper

The 914 English Language was one of the elective options for the Arts students. The subject, which was offered at principal paper level, was one of the five papers that students took for STPM. For this study the paper, concerned was the 914/3 reading component. The topics covered in this paper included the environment, information technology, computers, science and technology, tourism, economy, education, health, social issues, lifestyles and current issues.

The reading comprehension paper comprised four passages. These could include extracts from expository, narrative, argumentative and literary texts, as well as reports, articles, and non-linear texts. The questions asked were those that were open-ended testing students’ skills at transferring of information, answering vocabulary questions, completing cloze passages inferencing and summarizing.

3.2.5 Teaching-Learning Materials

3.2.5.1 Reading Text

The reading texts used in this study were expository texts depicting Malaysian lifestyles in the past. My students seemed to have difficulty comprehending expository texts. This was probably because students were exposed to narratives such as fairy tales and fiction. Both the texts were adapted from John Doraisamy’s (1993) Understand and Criticize. The
passages were taken from the same text because comprehension improves when students are familiar with the style of the author. The passages were also those that were culturally familiar to the students and students could find out more about the content from prior knowledge and from discussing with others. The first passage “Malaysian Street Personalities” (Appendix A) was about some famous roadside personalities in Malaysia and the second passage “The Chinese Girl in Singapore, 1913” (Appendix B) was on women’s role in society. The passages were followed by eight open-ended questions including vocabulary and summary questions.

3.2.5.2 Materials for Vocabulary Instruction

Students were given a vocabulary task sheet (Appendix C) containing 35 words, which were either familiar, partially familiar or unknown to students. There were eight nonsense words to test their knowledge of unknown words. Out of the 34 words eight words were target words for testing students’ vocabulary. In analysing students’ responses, a correct definition was termed ‘known word’. A domain related but incorrect definition was termed ‘partially known’ and words that had distorted meaning or no definition were considered ‘unknown’. Students were told to put the asterisk (*) to the words they considered nonsense words. They were then given the same words minus the nonsense words but this time in a context that were close to the text that they would be given later (Appendix D). They wrote their answers down on a piece of paper. This helped me identify if they knew how to use context to get the meaning of the word. Next, I allowed them to read the text in the group and they could discuss before giving the answers to the comprehension questions. This was the preliminary exercise. For the next lesson I instructed them how to connect ideas using semantic mapping. Another task was given using the same questions.
The vocabulary list was given so that the students did not spend too much time finding the meaning of words in the dictionary. According to Christine Nuttal (1982), too much dependence on the dictionary is harmful because a reader becomes a ‘less effective reader’ if he keeps stopping to look up new words in the dictionary. This also “seriously interrupts one’s thought processes, which should be engaged in following the continued development of thought in the text” (p.69). Hence to prevent too much dependence on the dictionary the vocabulary list was devised.

3.2.5.3 Leading / Probing Questions

The purpose of such questions was to “guide the students when they read, directing their attention to the important points in the text” (Nuttal, 1982, p.158). Leading questions (Appendix E) helped by providing them with a purpose to read, so that they paid attention to salient information as well as to activate their existing knowledge.

3.2.5.4 Semantic Mapping.

According to Ausubel (1968), meaning does not depend on the method of teaching. It depends on the learners' background and experiences and if materials can be related to their previously acquired knowledge, they can be meaningful. Semantic maps (Appendix I) were drawn after discussions in the class. The students were taught how to discern main ideas and make quick notes. Nwokoreze (1990) believes that “it is during the note-taking stage that students reach the highest level of comprehension” (p. 39). This required the skill of selecting relevant information from the less important. Nuttal (1982) advises that teachers should help students to establish the structure of a text so that they can pull out key ideas and leave out non-essential information. In this study, the students were also taught how to map out ideas or points in the text in the paragraphs so that they could link up the ideas. These ideas were
mapped out after every paragraph was read. Finally all the main ideas and salient information from the whole text were mapped out in one semantic map. This helped them answer the comprehension questions.

3.2.5.5 Testing Materials

A comprehension test consisting of eight questions was developed to measure students’ comprehension of the text. These comprehension questions (Appendix F) were formulated according to the classification of questions based on Bloom’s (1956) taxonomy of question types. The first six questions were open-ended questions that test students’ ability to infer, synthesize and evaluate. There was one question comprising eight items testing students’ understanding of lexical items. Question 8 tested students’ ability to summarize.

3.2.3 Stages in the Study

Action research is characterized by the spiraling cycles of problem identification, systematic data collection, reflection, analysis and redefinition of the problem. The stages in action research include planning, acting, observing and reflecting. Action research begins with process of firstly identifying a problem. Through a series of participant observation I was able to identify the problem my students had during reading comprehension. This was followed by the collection of data with recordings of the class procedures in my journal entries.

The next stage was the planning stage where I was able to plan a specific method to help my students overcome the puzzling problem that was identified earlier. This was then followed by a systematic and careful implementation of the intervention plan that I had thought of. After the implementation it was time to reflect and evaluate the effect of the plan that was implemented. This was the evaluation stage. The whole procedure of identifying the
problem, planning, implementing intervention and further evaluating was repeated and recorded systematically as field notes and journal entries.

3.2.4 Data Collection

According to Bogdan and Biklen (1992) action research “is a systematic collection of information that is designed to bring about social change” (p.223). I have used three data collection techniques namely, participant observation, questionnaires and interviews. During participant observation, I as the observer recorded the interactions that took place in the classroom and took down notes that were later entered into my journal. I also administered a questionnaire and conducted a structured interview to verify the finding with key informants in my classroom.

3.2.4.1 Questionnaire.

The questionnaire (Appendix J) comprising a total of 20 questions was administered to all 15 students in the class so as to get a more comprehensive idea of students’ preferences. The questions enabled me to:

i. gain insights into students’ perceptions and attitudes towards learning English

ii. ascertain what intimidated students and affected their ability in reading comprehension

iii. find out how students attempted reading comprehension questions

iv. understand students’ inadequacies during reading comprehension.

I formulated the questionnaire after an initial observation over three lessons prior to this. As I administered it, I noticed that students were keen to answer the questions. I had explained to them that I would like to help them improve and I needed to find out what their problems were (if there were any). They were very cooperative and they read and thought
carefully before answering the questions. This revealed to me that my students were keen to improve themselves. This also verified my opinion about their interest in studying English and that they were quite motivated to learn. I also instructed them not to discuss the questionnaire, as I wanted an individual and honest opinion. The questionnaire was conducted in 35 minutes. All the respondents answered all the questions. They probably understood all the questions.

3.2.4.2 Observations

During observation prior to the questionnaire I wanted to see what students did to answer reading comprehension questions. This was also to give me an idea of what I wanted to know about the reading class on the whole and what to ask in the questionnaire. Lacey (1976) defines participant observation as “the transfer of the whole person into an imaginative and emotional experience in which the fieldworker learned [learns] to live in and understand the new world” (cited in Bell, 1993, p. 110). As a participant observer in my class I seemed to take a new role and I had suddenly become aware of things that I had not noticed earlier. Initially, I had no checklist since I was not looking for anything specific. I wanted to observe the class situation, events and students’ behaviour and write up all these in my journal. I also observed the key informants’ interactions, what they did in their groups, their reactions and their behaviours. In order to reconstruct a complete account of what I had perceived in my classroom observations I made sure notes were written as soon as possible. I also included personal reflections and selective verbatim quotations were recorded for more meaningful analysis later. In the interest of anonymity and privacy the key informants were labelled S1, S2, S3 and S4.
Participant observations were carried out over three weeks. This allowed me to get an overall view of what my students did during reading comprehension prior to administering the questionnaire and later to ascertain the changes and effects of teaching-learning with intervention. As Nisbet and Watt (1980) point out direct observation is particularly useful to discover what people do or behave. As I wrote down the field notes and reflected on them I also realized that I was revealing my feelings about many things such as the students’ reactions, facial expressions their behaviour and I became very involved in my teaching and observations. As Rosaldo (1980) comments;

Feelings are an important vehicle for establishing rapport and gauging subjects’ perspectives…. they can be an important aid in doing qualitative research

Feelings were an important source for reflecting and they helped me formulate questions to get more details about my informants experiences and help build a rapport with them through this feeling of empathy and mutual understanding.

3.2.4.3 Interviews

Interviewing is a dominant strategy to gather descriptive data and to gain insights because data is collected in students’ own words. The interviews were mostly structured although they were conducted in a more informal way to allay nervousness on the part of the key informants. I interviewed all four key informants after going through the questionnaire. The purpose of the interview was to find out more about the background of the informants, to find out about their attitude towards learning English, their learning strategies and also to verify some of the responses in the questionnaire.
Conclusion

Action research implies adopting openness to new experiences and processes. It is a deliberate and conscious engagement of teachers who want to improve their teaching. In action research teachers are committed both professionally and personally to better themselves and achieve educational development through human inquiry. According to Bogdan and Biklen (1992) “action research strengthens one’s commitment and encourages progress toward particular social goals” (p. 228). With the principles of action research the teachers are empowered to observe, plan intervene, reflect and reevaluate teaching methods in their classrooms. My aim was to improve my teaching practice by making changes in the teaching-learning process through a very systematic, thoughtful and rigorous data collection method and analysis. The data that I collected revealed a lot of information and gave me insights about my students. One very interesting aspect of action research is that the more insights I gained, the more there was to further research and study. Action research is therefore an on-going process to improve one’s teaching. Action research can help make teachers become more aware of the teaching learning environment and this is essential for self-development and professional development. Gurge (1979) laments that

between the classroom and the staff room teachers destroy their most valuable property, the knowledge borne from experience.

(cited in Altrichter, Posch & Somekh, 1993 p. 176)

We therefore, need to be more aware of our surroundings and learn from the experiences gained in the classroom in order to improve ourselves as educators.