

CHAPTER 3 : METHODOLOGY

This chapter discusses the research design, subjects, materials and instruments of the study. The data collection and data analysis procedures are also discussed.

3.1 Research Design

The study will adopted a qualitative case-study design using eight students from an intact class of Form Four students as the subjects of the study. By way of comparison a descriptive interpretation of the reading comprehension strategies used by the high and the low proficiency subjects of this study was generated. The similarities and differences between the high and the low comprehending subjects in their application and regulation of these strategies was determined through a comparison of their strategy use.

3.2 Subjects

The subjects of this study comprised four high proficiency and four low proficiency comprehending students. Of the four subjects in each group two were males and two females. One male and one female subject in each of these groups came from an English speaking background while the other male and female subjects came from a non English speaking background. These subjects who were Form Four students were from the same co-educational school in Ipoh.

A purposive selection of the subjects in this study was carried out. Initially, the backgrounds of the Form four students was determined. The researcher identified students who came from an English speaking background and those who came from a non English speaking background through a questionnaire. The subjects from the

different backgrounds were then grouped according to gender before being identified as high and low proficiency comprehenders.

The selection of the high proficiency and the low proficiency subjects was carried out through a two-phase procedure. First, on the basis of their performance in the end of the year examination, subjects who scored below the 33% in English language were designated as low proficiency subjects while those who scored above the 67th percentile were designated as high proficiency students.

The second measure was their performance on the reading comprehension component in the monthly test. The maximum possible score on the reading component was 20. The high proficiency comprehenders all scored more than 15, while the low proficiency comprehenders scored 9 or less on this component. The designation of the subjects in this manner was confirmed against the ratings of the English teacher teaching the class.

After the initial grouping 24 subjects were identified: 12 males and 12 females. These subjects were then placed in two groups. Each group comprised 12 subjects : six males and six females. The 12 subjects in each group comprised six high proficiency and six low proficiency subjects. Each of these groups of six subjects comprised three subjects with an English speaking background and three subjects without an English speaking background.

In the second phase, the 24 potential students identified were given a training session. They were required to complete three cloze explanation tasks which were similar to the ones which were later used for data collection. The subjects completed one task each on three consecutive days on an individual basis.

On the first day of the task the researcher demonstrated the think aloud protocol using a maths problem. It was emphasized to the subjects that in thinking aloud a difference had to be made to differentiate between what they are thinking and what is

going through the minds. It is the thought processes that one undergoes which should be verbalized. Subjects then read a modified cloze text approximately the same length and that had the same number of context dependent verbs and nouns deleted as the text later used in the data collection phase.

Subjects were required to provide think alouds as they read and attempted to complete the blanks. The researcher occasionally reminded the subjects that she was interested in what they were doing as they were reading. The think alouds were audio-taped and this procedure was repeated for each of the other two tasks on the next two consecutive days. The demonstration by the researcher was not repeated.

At the end of each day's session the audio tapes of the think alouds were rated by the researcher and another senior English language teacher who had more than fifteen years of teaching experience and was familiar with the think aloud protocol methodology used in this study. The two raters together listened to the think aloud data but kept their ratings confidential.

At the end of the second cloze task, both raters compared their ratings of the think alouds and unanimously agreed that one high and one low proficiency comprehender be removed from each of the sub groups from the pool of potential subjects as their think alouds were wanting in the requisite richness of data. A total of eight subjects were dropped from the total pool of potential subjects.

At the end of the third cloze task, both raters compared their ratings again. The choice of one high and one low proficiency subject from each group who served as the subjects of this study was unanimous. A total of eight subjects were identified for this study. The subjects comprised four males and four females. Each of these four subjects comprised of two high proficiency and two low proficiency subjects. Out of the two high proficiency and two low proficiency subjects one was from an English speaking background while one was from a non English speaking background.

Thus the final selection of the high and low proficiency comprehending subjects of this study was based on their ability to provide think aloud protocols. The subjects also differed in their English language proficiency, gender and language backgrounds.

3.3 Materials

The cloze explanation task used by Kletzien (1991, 1992) was used in the present study. The cloze is traditionally used as a measure for reading comprehension. Kletzien (1991) suggests that the cloze task helps to "tap the reader's ability to make use of syntactic and semantic knowledge, an ability that is fundamental to comprehension" (p.17). The cloze explanation task also provides the opportunity to examine and compare strategy use from common points at which the subjects' comprehension of the text was interrupted.

The two cloze passages were tried out with a group of 34 Form Four students from a different school. Based on the feedback got from this pilot study modifications to the text were made where necessary.

Two passages of approximately 230 words (see Appendix 1) each were selected for this study. Since content words are more dependent upon the influence of the entire context, (Rankin and Thomas as cited in Kletzein, 1991, 1992,) ten content dependent verbs and nouns were deleted from each of the two passages to ensure subjects awareness of the entire content rather than just the surrounding texts.

3.4 Instruments

The Index of Reading Awareness (IRA) , which comprises a twenty-item multiple-choice questionnaire devised by J.E. Jacobs and S.G. Paris was used in this study to measure subjects awareness of the metacognitive reading comprehension strategy use.(See Appexdix 2)

The 20 items are divided into four categories : evaluation, planning, regulation and conditional knowledge. Each question was scored 0,1, or 2 points for an inappropriate response, for a partially adequate response and for a strategic response respectively. The order of choices was be randomized. The reliability of the IRA has been proven in studies done by McLain, Gridley and McIntosh (1991). They conclude that the IRA is an adequate and acceptable measure of metacognition reading awareness if it is used as a total score.

3.5 Data Collection Procedures

Data will be collected based on the subjects' awareness of reading comprehension strategies and the subjects' application and regulation of reading comprehension strategies.

The subjects' awareness of reading comprehension strategies was obtained through a questionnaire. Introspective methods were used to obtain data pertaining to subjects application and regulation of reading comprehension strategies. The introspective methods will include verbal reports, think alouds and a retrospective interview.

One often-voiced concern related to verbal report data is the incomplete reporting of the data pertaining to the processing strategies being investigated (Ericsson and Simon, 1980). The objection to using verbal reports as data rests on the assumption that much of language learning takes place at an unconscious level and is therefore inaccessible to mental process. Seliger (1983a) sees verbal reports at best as a source of information of how learners see what they have learned, and not as a means of described internalized systems responsible for interlanguage performance. However, Matsumoto (1993) suggests that this particular problem can be overcome by employing methodological triangulation, that is, the use of different methods on the same study.

More precisely, it is proposed that the thinking-aloud procedure be "supplemented by a retrospective interview. Such an interview will help probe into some of the statements made during the thinking-aloud thereby improving the reliability of the data analysis.

In the light of this suggestion, this study will combine the verbal report data with data obtained from the retrospective interviews.

The retrospective interview was conducted after the completion of the thinking-aloud task. The objective of the retrospective interview was to provide immediate confirmation of some of the initial interpretations of the thinking-aloud data by the researcher. In addition methodological triangulation has the advantage of providing a larger amplitude of data (Haastrup, 1987), which can help promote exploration of cognitive processes.

In this study the subjects provided the verbal reports on an individual basis as they completed a modified cloze text of approximately 230 words with ten context-dependent verbs and nouns deleted. The subjects were required to fill in each blank with a one word answer.

It has been pointed out in the literature that there is a need for the subjects and the researcher to conceptualize the situation in the same way when reporting. It appears then that the respondents may need some pre training and specific instructions to provide the desired form of data. Cohen (1987) also cautions that "faulty data may result from an inadequate understanding on the part of the respondents as to how they are supposed to report" (p.52). Based on these assumptions the data collecting session began with a practice phase.

However, since it is argued that the demonstration of the thinking-aloud procedure on a task similar to the one which the subjects will later attempt may bias the subjects' reporting by suggesting particular strategies or procedures to use (Afflerback & Johnson, 1984) the thinking-aloud demonstration was based on a Maths problem. While

this task indicated to the subjects what they were required to do in the thinking-aloud they were not influenced in terms of the nature of the report.

Since it is also argued that instructions given before the think-aloud task often influence the nature of the think-aloud report, written instructions were given to each of the subjects to ensure consistency. The instructions began with a description of the task and the subjects were instructed to say everything they thought and felt while filling in the blanks. The subjects were also given the privilege to ask questions after reading the instruction.

The subjects then attempted the task individually providing a think-aloud report simultaneously. The researcher monitored the verbal reports by reminding the subjects to keep talking about what they were thinking. The verbalizations were audio-taped.

Garner, as cited in Matsumoto (1993) cautions that the informant's verbal facility in the target language should always be considered in the data collection processes so that verbalization difficulties will not mask out emergence of some important mentalistic data. In order to reduce this problem subjects were allowed to verbalize in English and / or Bahasa Malaysia. Directions to this effect were included in written instructions which were given to the subjects at the commencement of the tasks. Three of the subjects used both English and Bahasa Malaysia in their verbal reports.

To ensure the validity of the retrospective report Ericsson and Simon (1980) argue that first the report be given immediately after the task is completed so that memory losses are minimal. Second, it must be tied to a specific instance of task performance, so that generalization processes do not come into play. Third, students should be provided with contextual information to activate their memories. Fourth, all information asked for must have been needed during the task performance. Fifth, no leading questions should be asked so as to minimize the effects of 'researcher bias' and

sixth, subjects should not be informed that they will be asked for retrospective comments until after the task performance so as to not affect their performance on the task.

The above guidelines were adhered to ensure the validity of the retrospective interviews, which were conducted with each subject immediately after the think-aloud tasks.

The same procedure, with the exception of the practice phase was repeated the following day when each subject attempted the second think-aloud task.

After the subjects had completed the think-aloud tasks on the two cloze passages the index of Reading Awareness questionnaire (see Appendix 2) was administered to each of the subjects. The IRA was administered after the think aloud tasks to ensure that the IRA did not in anyway influence the thinking aloud reports of the subjects.

In summary, the data collection procedure was as follows : 1) An explanation and demonstration of the think-aloud procedure 2) The thinking aloud protocol one the 1st task followed by the retrospective interview 3) The second thinking-aloud protocol followed by the retrospective interview 4) The index of Reading Awareness questionnaire.

3.6 Data Analysis

Data analyses of the verbal reports was done using the constant comparative method. The constant comparative method is a procedure which combines inductive behaviour-category coding with simultaneous comparison of all incidents observed (Dillon, 1989). In this method, each generated category and property is induced from salient patterns in the data (Alvermann, O'Brien and Dillon, 1990)

Primary data, comprising the thinking protocol transcripts (see Appendix 3 for sample) was analysed and reduced into codifiable categories pertaining to the strategies used by the subjects.

A macroanalysis of the data was first done to obtain a holistic sense of the types of reading comprehension strategies used by the subjects. This was followed by a microanalysis whereby the primary data was examined to derive precise and specific actions and events that made up the particular categories.

The coding and categorizing of the data was done together by the researcher and a senior English Language teacher so that in instances of a doubt, a consensus could be reached through discussion.

In order to confirm the reality of the data-based categories derived from the analysis an independent rater was provided an extract from the transcripts containing instances of strategy use. The rater was also provided with definitions of the strategy categories.

While analysing the data the researcher developed a set of strategy categories to characterize the strategy use of the two subjects of this study. An analysis in terms of type and frequency of strategy use by the two subjects was also attempted.

This was followed by a comparison of the strategy use of the two subjects. This analysis and comparison allowed the researcher to address the issue of how the high and the low proficiency comprehenders differed in their use of the reading comprehension strategies.