

Chapter III

Research Methodology

This study was conducted in order to survey the metacognitive reading strategies of first year college students at Yuxi Teachers College. The research design and methods are described in the following.

1. The Population and the Target Group
2. The Research Instruments
3. Procedures and Data Collection
4. Data Analysis

1. The Population and the Target Group

The population was first year students of Yuxi Teachers College, enrolled in the first semester of the 2003 academic year. They were 64 classes, 1245 students.

Normally, there are two classes in a major. Class A, consisting of students whose performance on the placement test is above 79 points. Class B, consisting of students whose performance on the placement test is below 79 points (see Appendix E). Class A was 42 students and Class B was 32 students in the Law Department. 74 subjects including all levels

of English proficiency were involved in this study. The researcher decided to choose two classes as the target group because the researcher hopes this study would more accurately reflect the general situation and provide more reliable data. If she selected only one class, Class A or Class B, she was afraid that the data would not be inclusive enough.

2. The Research Instruments

There are three kinds of instruments used in this study. They are: questionnaire, classroom observation and interviews.

2.1 Questionnaire

The researcher used a published instrument known as the Survey of Reading Strategies (SORS). It is specifically designed to assess adolescent and adult EFL students' metacognitive awareness and perceived use of reading strategies while reading academic materials such as textbooks. The instrument was adapted from Mokhtari and Reichard (2002) for use with an EFL population in high school, college, and university classrooms. It has been field-tested and has demonstrated reliability and validity as a dependable measure of these students' metacognition and reading strategies. It is based on the Metacognitive-Awareness-of-Reading-Strategies Inventory (MARSI), originally developed by Mokhtari and Reichard (2002) as a tool for

measuring native English speaking students' awareness and perceived use of reading strategies while reading academic or school-related materials. It was validated by a large native speaker population (N = 825) of students with reading abilities ranging from middle school to college, then field-tested and revised using a population of EFL students at two universities. It has been found to yield consistent and reliable data (internal reliability = .89 or better).

The SORS consists of 30 items, each of which uses a 5-point Likert scale ranging from 1 ("I never or almost never do this") to 5 ("I always or almost always do this"). Students are asked to read each statement and put a tick in the number box that applies to them, indicating the frequency with which they use the reading strategy implied in the statement. Thus the higher the number, the more frequent the use of the strategy concerned.

There are three subscales that are based on the results of a series of factor analyses. They are as follows:

- 1). Global Reading Strategies (GLOB.92): are those intentional, carefully planned techniques by which learners monitor or manage their reading, such as having a purpose in mind, previewing the text as to its length and organization, and use of typographical aids, tables and figures (13 items: No. 1, 3, 4, 6, 8, 12, 15, 17, 20, 21, 23, 24 and 27 in this questionnaire).

2). Problem Solving Reading Strategies (PROB.79): are the actions and procedures that readers use while working directly with the text. These are localized, focused techniques used when problems develop in understanding textual information; examples include adjusting one's speed of reading when the material becomes difficult or easy, guessing the meaning of unknown words, and rereading the text to improve comprehension (8 items: No. 7, 9, 11, 14, 16, 19, 25 and 28 in this questionnaire).

3). Support Reading Strategies (SUP.87): are basic support mechanisms intended to aid the reader in comprehending the text. These include using a dictionary, taking notes, underlining or highlighting textual information (9 items: No. 2, 5, 10, 13, 18, 22, 26, 29 and 30 in this questionnaire).

Stages of Constructing and Developing the Questionnaire

1). Different kinds of published instruments were examined. The (SORS) questionnaire was selected and revised to meet the purposes of this survey. For example, strategy category identifications (that is, GLOB, PROB, and SUP) were removed so as not to confuse the students.

2). The questionnaire was translated into Chinese to facilitate comprehension.

3). The questionnaire was reconstructed with the help of supervising

advisors to meet the needs of this research.

The Limitations of the Questionnaire

The SORS questionnaire is only one source of information to measure students' metacognitive reading strategies or awareness of using these reading strategies. One cannot tell with absolute certainty from this instrument alone whether students actually engage in the strategies they report using. Moreover, identifying certain strategies through SORS may only indicate that the students know about or are aware of those strategies. Awareness of strategies is not sufficient evidence to explain when, where, why and how the students use these strategies; other instruments will be used in order to get more complete and reliable results. A follow-up study, classroom observation and interviews were also used to collect and obtain more authentic and pertinent data.

2.2 Classroom Observation

Classroom observation, long employed as a research method in teaching and learning, examines the classroom as a place where interactions of various kinds take place. Allwright (1984, p.156) sees interaction in the classroom as "the fundamental fact of classroom pedagogy" because "everything that happens in the classroom happens through a process of living person-to-person interaction." This

perspective has often led researchers to observe and describe the interaction events that take place in the classroom in order to understand how learning opportunities are created.

Passive participant observation (Lynch, 1996) has been used as one instrument to explore what really happens in an English academic reading class. During the observation, the researcher didn't actively take part in the classroom interaction. She sat in the classroom and observed students practicing reading. The researcher also moved around or stood in front of the classroom and observed students. She used a classroom observation checklist and note taking, recording the strategies the students used while reading.

Stages of Constructing Observation Checklist

- 1). The researcher studied the classroom observation process and created a checklist (see Appendix C) in accordance with the purposes of the study.
- 2). The checklist was employed in order to insure consistent and cohesive data.
- 3). The checklist was reconstructed with the help of supervising advisors to meet the needs of the observation.

The Limitations of the Classroom Observation

Classroom observation could see some highlighted actions while reading, such as translation, underlining or circling, rereading, note taking, and using a dictionary, but it is difficult to observe thinking processes, such as planning, monitoring and regulating while reading. Therefore, interviews were used in this study in order to understand “when, where, how and why” the students used reading strategies.

2.3 Interviews

The purpose of the interview was to obtain information by actually talking to the subjects. The interviewer asked questions and the subjects responded in a face-to-face situation. Interviews are personal and therefore permit a level of in-depth information gathering, free response, and flexibility that can't be obtained by other procedures (Seliger & Michael, 1983, p.116).

In this study the researcher used the structured interview to interview the participants. The interview questions consisted of 10 items (see Appendix D). Most of them were open-ended questions. The same questions were given to two students in each class. The interviews were given to the participants who appeared to be most active in the classroom observation. They helped the researcher discover the “when, where, why and how” of the students use of strategies.

Stages of constructing and developing the interview

- 1). The researcher studied interview techniques and methods.
- 2). The researcher examined the records of the participants' performance on the placement test, questionnaire, and classroom observation, and attempted to identify the reading strategies they applied in reading. Then a set of questions was constructed to develop better insight (see Appendix D).
- 3). Tape-recording was used in the interviews.

The Limitations of Interviews

The structured interview has been used to interview the participants. Two participants from each class (class A and Class B) were given the same question (see Appendix D). The interview questions consisted of 10 items, so a total of 40 students were interviewed. The questions were given to the students who appeared to be most active in the classroom observation. It was impossible for the researcher to interview all the students. It is impossible for her to ask enough questions to cover all the possible responses in this area.

3. Procedures and Data Collection

This study involved 74 participants in the Law Department. It was

conducted from October 9th to November 14th, in 2003.

At the beginning of the study, the researcher measured the students' metacognitive awareness of reading strategies in their academic reading. The survey questions were completed by all the students in the both classes.

The questionnaire was completed with the following conditions.

- 1). The total time given was 15 minutes.
- 2). After explaining the purpose of the inventory, the researcher directed the students to read each statement and indicate how they use the strategy described in that statement, using the 5-point Likert scale provided after each statement.
- 3). The researcher reminded the students that their responses were to refer only to the strategies they used when reading school-related materials, not leisure materials such as newspapers or magazines.
- 4). The students also were encouraged to respond honestly to each statement in the inventory and to ask questions about any aspect of the inventory they did not understand.

When students finished answering the questionnaire, the researcher collected, tabulated and analyzed the results (see Appendix A: Table 1 and 2). The students' awareness of metacognitive reading strategies could be identified from the results. Then the researcher identified the three categories of metacognitive reading strategies and got the students'

frequency of using metacognitive strategies (see Appendix: Table 3 and 4).

Data was also collected from classroom observation and interviews. Before observation, a checklist was prepared to facilitate the observation. During the observation, the researcher went to the classroom and sat in the back of the classroom and observed the participants to see what strategies they used in their reading. However, when the researcher used a checklist to observe them, she found her observation zone was limited. She could not see in the front rows of the classroom clearly. Therefore, she began to move around the class slowly and quietly. When she passed the students, she focused on two pairs each time. Sometimes she would stand in front of the classroom and monitor the students' actions or strategies. Occasionally she would stand in the middle of the classroom or in the back of the classroom.

The researcher observed 12 periods in all, 6 periods in each class. The time span for each period was 50 minutes. However, the students were assigned to do reading and accomplish reading comprehension questions for only 15 minutes in each period. Therefore data collection was only focused on these reading tasks. When students were reading, the researcher would watch the students' actions or strategies very carefully, if the researcher saw a student's highlighted action or strategy, she drew a slash, or jotted it down if the actions were not included in the checklist.

After observation, she counted up all the slashes which included in the 12 checklists and tabulated the order from most frequently to least frequently (See p. 69).

Finally, follow up interviews were given to the students after class or during the break. Most of the interview questions were open-ended. For example, “When you are reading, if you encounter unknown words or phrases, what would you do? ” (See Appendix D.). Then the participants were asked to explain the usefulness of their strategies. All the interviews were tape-recorded and recordings were transcribed immediately after interviews.

4. Data Analysis

Charts, columns, percentages, note taking, tape-recording, and an observation checklist were used to analyze the data. The charts, columns and mean and percentages analysis were used to interpret the students’ metacognitive awareness of reading strategies and quantify the frequency of using metacognitive reading strategies. Note taking, and the observation checklist were used to measure the students’ metacognitive actions or strategies in the interaction between the text and the teacher or peer. Tape-recording was used to further investigation the metacognitive process to know “when, where why and how” the students selected the strategies they did.

Scoring

Data from the Survey of Reading Strategies (SORS) was recorded. The researcher added up the scores in columns to obtain a total score for the entire instrument as well as a subscale for each strategy (i.e., Global, Problem Solving, and Support Strategies). These scores could then be used to interpret metacognitive awareness of reading strategies. Three levels of reading strategy usage are identified along the lines suggested by Oxford and Burry-Stock (1995) for general learning strategy usage: **High (mean of 3.5 or higher), moderate (mean of 2.5 to 3.4), and low (mean of 2.4 or lower)** (see Appendix A: Table 1. and Table 2.). In order to explain the students' awareness of metacognitive reading strategies easily, the researcher decided to do qualitative research rather than quantitative research when interpreting the scores that were obtained from the questionnaire.

The Code of metacognitive Reading Strategies in the questionnaire

Data from the questionnaire was coded according to the following symbols:

- 1). “+” means the high level of metacognitive reading strategy usage (mean of 3.5 or higher).
- 2). “O” means the moderate level of metacognitive reading strategy

usage (mean of 2.5 to 3.4)

3). “ –” means the low level of metacognitive reading strategy usage (mean of 2.4 or lower) (see Appendix A: Table 1. and Table 2.)

Interpreting the Observations and Interviews

Data from observation and interviews was collected using the following research questions:

1). What metacognitive reading strategies are first year college students aware of when they read academic materials such as textbooks?

2). What are their observed metacognitive reading strategies, including positive and negative strategies when they read academic materials?

3). How do they use these strategies?

4). Can we identify and categorize the reading strategies that students employ (i.e. Global Reading Strategies, Problem Solving Strategies and Supporting Reading Strategies)?