CHAPTER 2 : REVIEW OF RELATED LITERATURE

This chapter begins by providing a theoretical framework of the intended research. Four concerns which have arisen from the literature are also discussed: Metacognition and reading, reading strategies, competent comprehenders, verbal reports, their orientation and limitations. Finally, a review of studies on strategy use and some methodological issues related to these studies are discussed.

2.1 The Theoretical Framework

The theoretical impetus for examining how learners approach the task of learning a second language is attributed to the changing view on the nature of the mind put forward by research in the field of cognitive science. Hunt (1982) describes this relatively new psychological discipline as "a systematic inquiry into our thinking selves (p.15)... a discipline devoted to exploring how our minds work ..." (p.17) .

Underlying these assumptions is the most basic fact that humans are processors of information. The mental operations that encode incoming information are referred to as processes. The changes brought about by these processes are referred to as organization of knowledge or knowledge structures. The techniques actually used to manipulate the incoming information and later, to retrieve what has been stored are referred to as cognitive strategies.

Research demonstrates that reading comprehension is the result of an interaction between the reader and the text. Successful reading comprehension relies on conceptual understanding, automated basic skills and strategies. Strategies include varying one's approach to reading depending upon one's goal and monitoring one's comprehension. This awareness and control which an individual has over his own

thinking and learning is characterized by Flavel (1978) as metacognition. This aspect is discussed in the next section.

2.2 Metacognition and Reading

Researchers consistently posit that metacognition plays an important role in reading. According to O'Malley, et al., (1983) "students without metacognitive approaches are essentially learners without direction or opportunity to review their progress, accomplishments, and future directions" (p.6).

Pressley, Snyder and Cariglia-Bull (1987) affirm that metacognition helps students to be consciously aware of what they have learned, as well as recognize situations in which it would be useful, and processes involved in using it. One reason metacognition is important is that if learners are not aware of when comprehension is breaking down and what they can do about it, strategies introduced by the teacher will fail and the learner will not be able to use the strategies strategically.

In the meta-cognitive conception of reading, expert readers possess a set of flexible, adaptable strategies, which they use to make sense of text and to monitor their ongoing understanding (Dole, Duffy, Roehler & Pearson, 1991). This view of meta-cognition suggests that when the structure or conceptual lead of a text is complex and comprehension is blocked, good readers use strategies to restore meaning (Duffy, et.al.1987). Thus, the term "meta-cognition" has been used to refer to the knowledge and control which individuals have over their own thinking and learning activities (Flavell, 1978). In short, meta-cognition can be characterized as the knowledge which guides effective selection and implementation of task relevant skills and strategies.

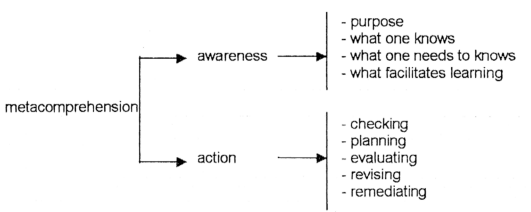
Two components of meta-cognition and strategy use have been identified : knowledge of strategies, and regulation of strategies (Flavell, 1978). Knowledge of strategies, involves awareness of what skills, strategies and resources that are needed

to perform a task effectively. Regulation of strategies entails the ability to use self-regulatory mechanisms to ensure successful completion of the task. These self-regulatory mechanisms involve checking the outcome of any attempt to solve the problem, planning the next move, revising one's strategies for learning and remediating any deficiencies encountered by developing compensatory strategies. The deployment of these self-regulatory mechanisms is known as cognitive monitoring (Flavell, 1981).

Fundamental to any task in reading is the derivation of meaning from the text. The cognitive activities involved in reading to derive meaning are virtually comprehension monitoring or metacomprehension (Myers, 1991, p.259)

Metacomprehension is any deliberate, planful control of activities that gives birth to comprehension. Brown, as cited in Phillips (1992, p.13) refers to the two components of metacognition in his model (Figure 3), knowledge of strategies and regulation of strategies – as awareness and action respectively.

Figure 1. Brown's Components of Metacomprehension



Awareness of one's cognitive behaviour during the reading process includes awareness of the purpose of the reading task, awareness of what one knows about the topic and the reading task, awareness of what needs to be known, and awareness of the strategies and skills that facilitate or impede reading from text.

Action encompasses the ability to use cognitive monitoring or comprehension monitoring to ensure the successful completion of the task or "the utilization of strategies necessary for achieving comprehension" (Wagoner 1983, p.330). Comprehension monitoring allows readers to judge whether comprehension is taking place and helps them decide whether and how to take compensatory action (Paris and Myers, 1981; Mier, 1984).

The action component includes checking the outcome of attempts made to solve the problem, planning one's next move, evaluating the effectiveness of any attempted action, testing and revising one's strategies for learning, and remediating any difficulties encountered by using "compensatory" or "fix-up" strategies. Kletzien (1992) stresses that it is the action component or "strategy regulation – knowing when and why to use strategic behaviour -- [which] is the hallmark of strategic readers. Strategic readers are able to regulate their strategy use for different reading tasks" (p.192). On the other hand, Paris, Lipson and Wixson (1983), assert that strategic behaviour connotes intentionality and purpose on the part of the learner. This means, when readers encounter obstacles to their comprehension, they need to utilize strategies to overcome their difficulties. In the meta-cognitive conceptualization of the reading process the basis of reading is the effective application of a set of strategies. The next sections attempt to explain reading strategies and the competent reader.

2.3 Reading Strategies

Reading strategies are of interest not only for what they reveal about the ways readers manage their interactions with written text, but also for how the use of strategies are related to effective reading comprehension.

Reading strategies indicate how readers conceive a task, what textual cues they attend to, how they make sense of what they read, and what they do when they do not understand (Block, 1986). They range from simple fix-up strategies such as simply rereading difficult segments and guessing the meaning of an unknown word from context, to more comprehensive strategies such as summarizing and relating what is being read to the reader's background knowledge.

Strategies can be referred to as language learning behaviours learners actually engage in to learn and regulate the learning of a second language. Information about them can be collected by observing language learners or by having them describe what they are doing while performing a learning task. Some of these actions are observable (asking question) while others are not (making a mental picture). Sometimes strategies may be consciously deployed and they can be amendable to change. They can be modified, rejected, and unfamiliar ones can be learned. In other words, they are part of our mental software (O'Neill, 1978; Pressley and Levin, 1983).

Strategies are distinguished from other cognitive processes through the element of choice and effective L2 learners are aware of the strategies they use and why they use them. Strategic reading is a prime characteristic of expert readers because it is woven into the very fabric of "reading for meaning," and the development of this cognitive ability. Because strategies are controllable by readers, they are personal cognitive tools that can be used selectively and flexibly.

A vast amount of research in first language reading and reading strategies has found that good readers are better at monitoring their comprehension than poor readers,

that they are more aware of the strategies they use than are poor readers, that they use strategies more flexibly and efficiently (Garner, 1987). They are also able to notice inconsistencies in a text and employ strategies to make these inconsistencies understandable (Baker and Brown, 1984; Garner, 1980).Research in second language reading has also demonstrated that strategy use is different in more and less proficient readers, and that more proficient readers use different types of strategies, and they use them in different ways (Barnett, 1988; Carrell, 1989).

Although there have been several case studies showing relationships between various reading strategies and successful or unsuccessful second language reading the relationships between strategies and comprehension are not simple and straightforward (Sarig, 1987). The use of certain reading strategies does not always lead to successful reading comprehension, while failure to use these strategies or use of other strategies does not always result in unsuccessful reading comprehension. Research reported by Anderson in 1991 shows that there are no simple correlations or one-to-one relationships between particular strategies and successful or unsuccessful reading comprehension. More recently, Kern (1997) showed that no strategy is inherently a "good" or "bad" strategy.

Anderson concluded from his data that successful second language reading comprehension is "not simply a matter of knowing what strategy to use, but the reader must also know how to use it successfully and know how to orchestrate its use with other strategies. It is not sufficient to know about strategies, but a reader must also be able to apply them strategically " (1991, p.19) . Similarly, Kern concluded from his data that there are good and bad uses of the same strategy, and that the difference between a "good" and a "bad" use of the same strategy is in the context in which they are used, how they are used and how they interact with other strategies, that is, how they are "operationalized " – metacognitively or not.

2.4 Competent Comprehenders

Most educators agree that competent comprehenders exhibit a set of discernible characteristics. Researchers have found that competent readers actively construct meaning through a process in which they "interact" and "transact" with the words on the page, integrating new information with preexisting knowledge structures (Anderson, Hiebert, Scott, & Wilkinson, 1985; Jensen, 1984; Lapp & Flood, 1986; Paris, 1986; Rosenblatt, 1938, 1982).

Good readers are strategic readers who actively construct meaning as they read; they are self-motivated and self-directed (Paris, Lipson, & Wixson, 1983); they monitor their own comprehension by questioning, reviewing, revising, and rereading to enhance their overall comprehension (Baker & Brown, 1984). Good readers have learned that it is the reader in the reading process who creates meaning, not the text or even the author of the text.

There is some consensus among researchers that competent readers have a plan for comprehending; they use their metacognitive knowledges in an orderly way to implement their plan (Flavell, 1981). While each reader's plan varies for each text and task, the following steps seem to be part of the competent reader's generalized plan for many different kinds of texts:

Before reading, the competent reader:

Previews the text by looking at the title, the pictures, and the print in order to evoke relevant thoughts and memories.

Builds background by activating appropriate prior knowledge through self-questioning about what he/she already knows about the topic (or story), the vocabulary and the form in which the topic (or story) is presented.

Sets purposes for reading by asking questions about what he/she wants to learn (know) during the reading episode.

During reading, the strategic reader:

Checks understanding of the text by paraphrasing the author's words

Monitors comprehension by using context clues to figure out unknown words and by imaging, imagining, inferencing, and predicting

Integrates new concepts with existing knowledge, continually revising purposes for reading.

After reading, the strategic reader:

Summarizes what has been read by retelling the main ideas of the text.

Evaluates the ideas contained in the text

Makes applications of the ideas in the text to unique situations by extending the ideas to broader perspectives.

Source : Flood and Lapp, 1990

2. 5 Verbal Reports and Learning Strategies

2. 5.1 Verbal Reports

Verbal reports have been used in various ways to help researchers and teachers to describe the strategies students use to learn and communicate in an L2. Verbal reports can help to describe the strategies students use in compensating for gaps in communicative ability. (Poulisse, Bongaerts & Kellerman, 1987).

Verbal reports are not one measure or research method but rather encompass a variety of techniques for gathering data about the thinking or cognitive processes people use during learning tasks. Such verbal reports include : 1) self-reports, in which learners describe what they do in generalized statements about their learning behaviour 2) self-

observation, in which learners inspect their specific language behaviours introspectively or retrospectively 3) self-revelation, in which learners think aloud while they perform a learning task, providing a stream-of-consciousness disclosure of the imformation they pay attention to or some combination of these (Cohen, 1987; Cohen & Hosenfeld, 1981).

2.5.2 Value of This Orientation

Verbal reports can help teachers, researchers, or students themselves better understand the nature of learners' views of their learning tasks. In such studies, the respondents answer interview questions or complete written questionnaires about their language-learning strategies. Inquiry with second or foreign language learners involving self-observation and self-revelation has helped educators to conceptualize more precisely what students think when they perform learning tasks or encounter problems in an L2, distinguishing strategies that may be more or less effective for learning or communication.

A key reason for moving beyond self-report to self-observation and self-revelation is the interest in obtaining data that describes learning or communication at or near the moment it occurs. Such data can be expected to more accurately reflect what learners actually do than might the response to a questionnaire or interview item calling for a description of generalized behavior, in which people may forget what they actually do or rationalize their behavior in overly general terms. In effect, self-revelation and self-observation are intended to complement self-reports – to produce convergent assessment of learner strategies.

2.5.3 Limitations of This Orientation

Critics of verbal report methods make the following points :

1. Much cognitive processing is inaccessible because it is unconscious (see, e.g., Seliger, 1983).

2. Verbal report probes may force students to produce a verbal response that is not closely related to their natural thought processes (Ericsson & Simon, 1984).

3. Verbal reports may be dependent on retrospection – in that it can take 20 minutes to report on 1½ seconds of mental processing (Boring, 1953). Hence, what may have begun as an introspective account quickly turns into a retrospective one.

4. Respondents may tend to repress data – to supply socially acceptable data. (Lyons, 1986).

5. Verbal report methods may have an intrusive effect. For example, in reading research, immediate retrospection may distort the process of reading if the readers read more closely than normal, read sentence by sentence, or concentrate on the additional cognitive and metacognitive task (Mann, 1982).

6. The results vary according to the type of instructions given, the types of material used in collecting protocols, and the nature of the data analysis (Olson, Duffy, & Mack, 1984)

7. The results also vary depending on the characteristics of the participants in research such as their verbal skills. Some may be more adept than others at providing the appropriate amount of verbal report data, at the appropriate level of specificity (Olson et al., 1984).

8. Differences may exist between spoken and written verbal reports so that studies combining both sources or data may ultimately find the two types of data to be incompatible (Afflerbach & Johnston, 1984).

9. Problems can arise if respondents do a task in a target language and report on it in their L1 or another language. The reporting (especially in on-line/ self-

revelation) may alter the original thought processes more than when no recoding takes place (Faerch & Kasper, 1987)

Source : Cohen 1987.

10. Although critics would suggest that these numerous problems with verbal report measures seriously limit the generalizability of research findings and might even preclude their use, proponents of verbal report argue that cognizance of these problems in planning a research design may help to avoid some of them and that others will simply prevail, just as methodological problems are inherent in the use of other research techniques as well. Besides. the directness of introspection gives it a character not found in any other investigation of psychological phenomena.

2.6 Review of Studies on Strategy Use

Numerous studies have investigated students' use of reading strategies. While some studies have set very modest aims of merely recognizing the types of strategies used by readers others have attempted to determine the variables affecting their use and whether the provision of instruction in strategy use can have a positive effect on reading comprehension.

This review considers different studies on reading strategies: those that only assessed students use of strategies; those that provided a comparison of strategy use by good and poor students and those that related strategy use to variables such as proficiency and gender. Although these studies differ considerably in their aims, methods and conclusions, all of them do however, compare good and poor comprehenders' strategy use. The findings of these studies unequivocally demonstrate that good comprehenders are better able to monitor their comprehension and use more

comprehension strategies, and that strategy use is significantly related to language proficiency and gender.

In a study done by Garner (1980) on text inconsistencies marked differences were reported between good and poor comprehenders while performing the assigned task. It was found that good comprehenders were better able to spontaneously monitor the disruptive effect on comprehension compared to poor comprehenders. Even prompting did not help poor comprehenders to pinpoint the inconsistencies embedded in the text or in monitoring their comprehension.

Studies done by Paris and Myers (1981) found that poor comprehenders did not engage in accurate monitoring as frequently as good comprehenders did. These studies used hesitations, repetitions and self-corrections of nonsense words in texts as a measure of spontaneous monitoring while subjects read aloud. The findings revealed that only 42% of good and 32% of poor comprehenders monitored more than half the total number of nonsense words and phrases in the text. However, in a directed monitoring task which required underlining of nonsense words and phrases it was found that the good and poor comprehender performed poorly at detecting anomalous words. This contradicts Garner's findings (1980) where the good comprehenders performed significantly better than the poor comprehenders.

In another study done by August, Flavell and Cliff (1984) using the direct monitoring task it was found that poor comprehenders were significantly poorer in reporting a missing page, placing it correctly, than the good comprehenders. It was also reported that the good comprehenders tended to slow down their reading following omissions.

Hare and Borchardt (1985) who partially replicated the study done by Garner (1980) report findings contrary to Garner's findings. Both the good and poor comprehenders were unsuccessful at monitoring anomalies spontaneously. However, in

the directed monitoring task good comprehenders did show a significant awareness of error detection than poor comprehenders. The poor comprehenders apparently were more preoccupied with problems posed by vocabulary than the inconsistencies in the text.

Reiss (1985) used two self-report surveys on successful and experienced university level students. She found that subjects' who used guessing, persevered to communicate, attended more to form than to meaning, practiced often and monitored the speech of others and themselves. She also found that these university undergraduates did not use a lot of mnemonic strategies and were often inhibited.

O'Malley et.al, (1985) report that poor high-school students tend to use strategies that require less active manipulation of the learning task like repetition and note taking more frequently. Strategies such as elaboration, deduction and grouping which entail a high level of active involvement with the learning material are used less frequently by them. These findings conclude that learners at different levels find different strategies more useful for certain tasks.

Though most of the above studies investigated the strategies used by readers to resolve anomalous words or miscomprehension, in general the findings above indicate that good comprehenders are better able to monitor their comprehension than poor comprehenders.

Research findings pertaining to comprehension strategy use by poor and good comprehenders are also mixed. While some researchers have found that differences exist between poor and good comprehenders others report that both the groups of students depend heavily on the same set of strategies.

Sullivan (1978) studied good and poor comprehenders ability to focus on overall meanings conveyed by word clusters in texts and their ability to relate previous

knowledge to information in the text being read. She found that the good comprehenders performed better on both the tasks as compared to the poor comprehenders.

Chandrasegaran (1992) found some similarities in strategy use by poor and good students. Both groups of students tend to use strategies such as searching for meaning and memorization of rules. She also found that high proficiency students tended to use more higher level strategies in contrast to poor learners.

Findings reported by Hasbun (1988) who replicated the Reiss (1985) study found that good language learners used more strategies and used them more consistently than poor learners. The learners chose strategies based on their perception of the relevance to achieve learning goals.

Anderson in 1991, shows that there are no simple correlations or one-to-one relationships between particular strategies and successful or unsuccessful reading comprehension. His research with native Spanish speaking, university level, intensive ESL students reading in English as their second language and self-reporting their strategy use, suggests wide individual variation in successful or unsuccessful use of the exact same reading strategies. Rather than a single set of processing strategies that significantly contributed to successful reading comprehension, the same kinds of strategies were used by both high and low comprehending readers. However, those readers reporting the use of a higher number of different strategies tended to score higher on Anderson's comprehension measures.

Similarly, Kletzien (1991) found both groups of comprehenders to be dependent on the same strategies. No difference was noted when these groups of students attempted easier texts, however, with increasing text difficult, strategy use declined for the poor comprehenders. The good comprehenders on the contrary used more types of strategies. Kletzien concludes that although the poor comprehenders were aware of the

same strategies as the good comprehenders they regulated the use of strategies less efficiently.

More recently, Kern (1997) reported on a case study of two American university students reading in French as a second language "that no strategy is inherently a "good" or "bad" strategy, that so-called "bad" strategies are used by "good" readers and vice-versa (p.4) Kern showed that this is true of translation as a strategy.

Strategy use has also been significantly related to language performance, gender and whether a language is being studied as a second language or a foreign language. In studies conducted in a wide variety of geographical and cultural settings, students who were better in their language performance generally reported higher levels of overall strategy use and frequent use of a greater number of strategy categories.

Oxford and Nyikos (1989) report from a study conducted on university students using the SILL that language proficiency self-ratings in speaking, reading and listening were highly correlated with strategy choice. Students who had rated themselves highly for speaking, reading and listening were greatly influenced by functional practice and conversational input elicitation strategies formal rule related practice strategies and general study strategies. They also found that females reported more strategy use than males in formal rule related practice and conversation elicitation input.

Similarly, Politzer (1983) reports significant relationships between strategy use and language achievement. He also reports that females show a greater tendency than males in the use of social interactions.

Green and Oxford (1992) report significant variation by proficiency and gender in overall strategy use. Proficiency level indicated a significant effect on the cognitive, compensation, metacognitive and social category of strategies. These strategies were more used by the more successful students. Females used strategies significantly more often than males. However, there was no significant variation by proficiency and gender.

Bacon (1992) found that men and women adjusted their strategies differently to the difficulty of the passage. In a local study Rosna and Sharifah (1994) report that while females preferred affective strategies compared to males, there was no significant differences in other strategies.

To summarize, studies on strategy use have investigated subjects awareness of comprehension strategies, differences in strategy use by good and poor comprehenders and how the use of strategies relate to language performance and gender. Though the findings from some of these studies appear to be mixed, the findings in general indicate that good comprehenders are better able to monitor their comprehension, females tend to use more affective and social strategies than men and good comprehenders not only tend to use more comprehension strategies they use them more extensively than the poor comprehenders.

However, since findings are mixed it is not possible to draw firm conclusions. These inconclusiveness could possibly be attributed to some shortcomings in procedures used in these studies.

2.7 Methodological issues Related to Research on Metacognitive Strategies

Investigations of metacognitive strategy use normally employ one or two experimental paradigms: error detection methodology or self report data from protocols and interviews. Reading comprehension is usually measured using the error detection paradigm while strategy use is examined through self-report data from protocols or interviews. In the error detection paradigm a 'problem' is introduced into the otherwise intact passage. Failure to detect the problem indicates a failure to evaluate comprehension while reading (Zabrucky and Ratner, 1989). The research studies done by August, Flavell and Cliff (1984), Garner (1980), Hare and Borchardt (1985) and Paris and Myers (1981) made use of the error detection paradigm.

Studies done by Reiss (1985), O'Malley et. al, 1985, Hasbun (1988) and Kern (1997) Kletzien (1991), Anderson (1991), to examine strategy use employed the self report data from protocols and interviews paradigm.

In these studies, introspective techniques were used to collect data pertaining to the comprehension strategy use of good and poor comprehenders. The use of these techniques normally entails subjects reading a text and then performing a task, following which interview data is obtained pertaining to their strategy use. Although this technique provides information pertaining to strategy use it does not provide views of the readers' mental activity. It does not reveal why readers fail to understand nor how they are processing text (Block, 1986 p.464). Several researchers (Barnett, 1988; Block, 1986) have suggested that the thinking-aloud technique be used since thinking-aloud protocols purportedly provide a direct view of a reader's mental activity (Ericsson and Simon,1980).

Studies which have used an error detection task sometimes attempt to disguise the task in the form of an editorial or proof reading task. August, Flavell and Clift (1984) required their subjects to indicate whether they thought the story they had read was inconsistent, locate the inconsistency, explain why the story was inconsistent and indicate how they could fix the story. One of the short-comings of this approach is that often subjects were not able to pinpoint the inconsistency. In such cases it is difficult to make true comparisons of the strategy use of good and poor comprehenders.

Studies done by Kletzien provide an important variation in the task variable. In her studies she provided her subjects with a cloze passage. The subjects were interviewed after they had completed the cloze, to gain insights into their comprehension strategy use. This procedure has the advantage of focusing subjects' use of comprehension strategies on specific points of the text thus making it possible for

comparative investigations of the metacognitive strategy use of good and poor comprehenders.

From the studies mentioned above only two studies by Kletzien (1991 and 1992) and the Anderson study (1991) explored the full range of strategies used by subjects to comprehend the texts being read. Oxford R, and Green (1992) expanded their investigation of strategy use to six strategies – affective, social, metacognitive, selective reading, memory, general cognitive and compensatory. Although the six categories were not intended to reflect a perfect theoretical construct of language learning strategies, they were designed to expand the frequently restricted conception of such strategies in research,

While these studies differ in the extent to which comprehension strategy use is investigated, one short coming common to all of them is that they make use of predetermined strategy categories derived from prior research. None of the studies reviewed makes use of data-driven categories, that is categories of strategy use derived from the data obtained from the study itself. However, one characteristic common to all the studies reviewed is the concern of discovering a general set of strategies used by poor and good comprehenders and the differences in strategy use by these subjects.

While it is stressed that investigations that are aimed at deriving generalizations can be applied to whole sets of populations, it is also important to focus on individual differences.

The case study approach, using think alouds and retrospective unstructured interviews which is the proposed methodology for this study will allow for an opportunity to directly investigate metacognitive comprehension strategy use by examining the stops and starts good and poor comprehenders make as they read in their second language.

This study will provide insights into the awareness that students of differing abilities have of metacognitive comprehension strategies and their ability to use these strategies.

2.8 Summary

ISuccessful reading relies on conceptual understanding, automated basic skills and strategies. In the metacognitive conceptualization of reading, the expert reader is aware and able to use, a set of flexible, adaptable strategies to monitor and regulate comprehension of text materials. Information about these behaviours can be collected by observing language learners or having them describe what they are doing while performing a learning task. Though verbal reports have their shortcomings they can help us to understand learner's views of their learning Similarly studies comparing the strategy use of high and low proficiency comprehenders can provide valuable insight for effective instruction and enhance students' ability to understand texts they read.