Chapter II

Literature Review

The scope of the literature review includes the following items.

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1. Theories and Principles of Reading

1.1 Definition of Reading and Reading Comprehension

Reading and reading comprehension are used interchangeably. Reading is the process which is used when readers interact with reading materials. Reading comprehension is accomplished when readers understand what a particular text is about. However, sometimes reading is used as the meaning and understanding in the concept of reading comprehension. The following definitions of reading and reading comprehension are gathered from various perspectives.

Augsaranukrat (1989) defines that reading is reading for meaning. She states that readers do not necessarily know the meaning of every word while reading. Readers need to use their previous experience and knowledge to interpret the meaning of the language used.

Cohen (1990) provides four sets of definitions which are taken from Goodman (1967), Eskey (1986), Beaugrande (1984), and Candlin & Saedi (1981) respectively. Goodman (1967) defines reading as "a most active psycholinguistics game" which is a process where readers predict what would come next on the basis of what they have already read. Eskey (1986) defines reading as "a continual interaction of identification skills," the recognition of words, phrases, and grammatical signals. Beaugrande (1984) defines reading as "a perception of current text in the perspective of previous text already read and prediction of the text still to come." Candlin & Saedi (1981) defines reading as "a dynamic interaction between the writer and the reader." Similarly, Rubin and

Thompson (1994), Siberstein (1994), Kitao, K. and Kitao, S.K. (1998a) also define reading as "an active information-seeking process" rather than "a passive reception of meaning from the text."

Weir (1993) says that reading is seen as a selective process taking place between the reader and the text, in which readers' background knowledge and various types of language knowledge interact with information in the text to achieve reading comprehension. It involves text types, purposes, performance conditions, activities in an academic context, operations, and levels of performance.

With regard to reading comprehension, Carr (1983) states that reading comprehension is the ability which readers use to interpret the text by linking their previous knowledge to help them to interact and evaluate text meaning. His idea is compatible with Widdowson (1986) and Dole et al. (1991 cited in Odden, 1995, p. 80). Widdowson (1986) states that reading comprehension is an interaction between readers and writers. Readers use their background knowledge to interpret the meaning of text in which writers want to communicate. Dole et al. (1991) mentions that reading comprehension is an interactive process between reading and comprehension. Readers can fully use their competence effectively when contents and activities of text are appropriate to their background knowledge.

Anderson (1985) states that reading comprehension is an activity or a process which readers use for finding meanings of text in different reading comprehension levels, from letter, word, phrase, until sentence. Similarly,

Morris & Steward (1984) conclude that reading comprehension is reading in which readers can comprehend meanings of text. Readers need to use their background knowledge, and language competence to predict text which lead to text comprehension.

From the meanings stated about reading and reading comprehension, reading is viewed as an interactive process which readers need to combine their prior knowledge, and experience with new information. Readers also need to use reading strategies to enhance their reading skills for extracting and comprehending meanings of written texts. Once the readers comprehend the texts, they are successful in reading.

1.2 Reading Comprehension Skills

The "skills" refer to "information-processing techniques that are automatic." Skills are applied unconsciously at all levels of reading comprehension (Carrell, 1998, on-line serial). The reading comprehension skills which are presented as follows are summarized from Nunan (1993), Grellet (1994), Brown (1994), and Kitao, K. and Kitao, S.K. (1998b).

First, readers need skills which help them to recognize the script of a language and discriminate graphic symbols with sounds and words. After readers understand pieces of information in a sentence, they need skills to help them to deduce meanings of words from their roots, affixes, and contexts. Later on readers need to understand relationships among parts of the text such as lexical and cohesive devices as well as understanding different types of text

(e.g. cause-effect, compare-contrast, opinion, and generalization). At the intermediate level, readers need to improve their skills in distinguishing implicit and explicit meanings, inferring contexts that are not explicit by using background knowledge, and identifying main ideas from supporting details. As reading comprehension skills are developed, readers need to extract salient points to summarize, select extractions of relevant points from a text, and anticipate what will come next. Finally, readers need a process to develop their skimming, scanning, reading critically, and metacognitive strategies.

In summary, reading is a process which consists of various reading comprehension skills. Readers need to practice from basic skills to the skills which are more complex. Reading skills help readers to improve their reading ability when they can apply them automatically or unconsciously.

1.3 Reading Strategies

The "strategies" are "actions selected deliberately to achieve particular goals." Skills can become strategies and strategies can also become skills. Skills can become strategies when they are used intentionally. Strategies in which "go underground," can become skills. Strategies are more efficient and advanced when they are generated and applied automatically as skills. Strategies are "skills under consideration" (Carrell, 1998, on-line serial).

According to Cohen (1990), he states that reading strategies are those "mental processes" that readers consciously choose to use in accomplishing reading tasks. Strategies, techniques, and tactics are all considered as strategies

even if they may or may not facilitate successful comprehension of texts. He further divides reading strategies into eleven items.

The first reading strategy is clarification of purpose. Readers need to know why they have to read the text, then they can decide how they are going to read it. For instance, if the readers want to find out the definition of difficult words in the dictionary, they may need scanning rather than responsive reading.

The second reading strategy is the organization of text. Readers look how the text is organized by skimming the text, taking note of any subtitles, figures, tables, pictures, and jumping to see a summary, discussion, or conclusion.

The third reading strategy is reading for meaning. This type of reading strategies deals with schemata. Schemata refer to background information which readers use to interpret the new information. The three basic types are content, language, and textual schemata. Content schemata involve systems of factual knowledge, values, and cultural conventions. Language schemata involve grammar, spelling and punctuation, vocabulary, and cohesive structures. Textual schemata involve the rhetorical structure of different modes of text, for instance, recipes, letters, fairly tales, research papers, science textbooks. In order to read the text, readers need to use their schemata according to the different types of reading text.

The fourth reading strategy is focusing on major content. Readers pay attention to major content as distinguished from trivia. If there is difficult vocabulary, finding meaning in a dictionary is one way to help readers understand the text.

The fifth reading strategy is parsimonious use of a dictionary. The theory suggests that readers should use monolingual dictionary sparingly. Overuse of dictionary and using a bilingual dictionary are the two big mistakes which usually occur with non-native readers. Readers should also take notes on the meaning of unknown or unfamiliar words. Readers often keep looking up the same words over and over because they forget what the entry was immediately after finding it.

The sixth reading strategy is judicious use of context. If the text has relatively few difficult words, readers should interpret the meaning of unknown or unfamiliar word from the context. If the text is too difficult for readers and the context is too limited, using the dictionary wisely can help the reader to extract the meaning.

The seventh reading strategy is reading in broad phrases. Successful readers tend to take in groups of words at a time, not word by word. This strategy helps readers to speed up their reading speed.

The eighth reading strategy is ongoing summaries. Readers do few notes while they are reading. It helps readers to recognize what they have read. They are two kinds of ongoing summaries. The first one is writer-based whereas the second one is reader-based. The former written, writer-based, is for the person who do the summary and not for someone else. The later written, reader-based, is not only for writers, but also for readers.

The ninth reading strategy is making predictions. When readers read too slow and plodding, they usually tired and bored. Keep actively predicting what

the writer is likely to be writing about in the next portion of text can help readers stay alert.

The tenth reading strategy is looking for markers of cohesion. This reading strategy is an aid in a reading process. Such markers indicate who or what is being referred to and the function of the reference.

The last reading strategy is metacognitive strategies. Metacognitive strategies include planning which strategies to use, monitoring the use of strategies, and assessing the effectiveness of the use of strategies. When the reading strategy does not work, readers then choose new reading strategies which can fit with that piece of written text.

In addition, Brown (1994), Rubin and Thompson (1994) also support the following processes as a part of reading strategies. First, for intermediate to advanced levels, readers should read silently because it helps them to have relatively rapid comprehension. They are three silent reading techniques: readers do not need to pronounce each word, readers should try to visually perceive more than one word at a time, preferably phrases, and readers should skip some unknown words or try to infer their meaning from context.

Second, skimming and scanning are needed in reading. Skimming consists of quickly running one's eyes across a whole text to get the gist. It gives readers the advantage of being able to predict the purpose of the passage, the main topic or message, and possibly some of the developing or supporting ideas. In contrast, scanning is a process of quickly searching for some particular

piece or pieces of information in a text. The main purpose is to extract certain specific information without reading through the whole text.

Third, semantic mapping or clustering helps readers to group their ideas into meaningful clusters. There are many different forms of semantic mapping depending on the texts and the readers. The followings are the examples of semantic mapping adapted from Tangphong (1993).

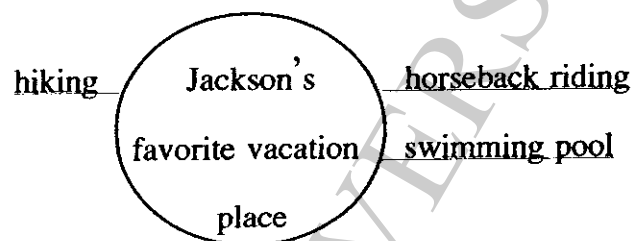hiking — Jackson's favorite vacation place — horseback riding / swimming pool

Illustration 1: Example of semantic mapping 1

Dark came
Mary and Beth left library
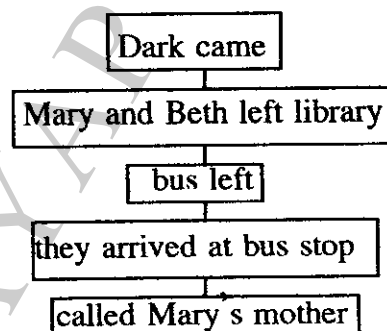bus left
they arrived at bus stop
called Mary's mother

Illustration 2: Example of semantic mapping 2

Forth, guessing is one of the reading strategies. Readers can use guessing to find meaning of words, figure out grammatical and discourse relationships, infer implied meanings, know cultural references, and get content messages. However, readers need to guess wisely by using their schemata and metacognitive strategies or clues which are available to them.

Fifth, vocabulary analysis is another way that readers can use guessing abilities to help them to get the meaning from the texts. Readers may look for: (1) prefixes (co-, inter-, under-, etc.) that may give clues, (2) suffixes (-tion, -tive, -ally, etc.) that may indicate what part of speech it is, (3) roots that are familiar, (4) grammatical contexts that may signal information, and (5) semantic context for clues.

In conclusion, reading strategies is mental process, action, technique, or tactic which readers select intentionally in order to comprehend what they are reading. The various types of reading strategies allow readers to select appropriate reading strategies to the particular texts' genre, the readers' own schemata, and the readers' own metacognitive awareness.

1.4 Reading Comprehension and Schema Theory

Bartlett (1932, 1958) is credited with first proposing the concept of schema which is widely used today. After that his concept was developed by both psycholinguistics and cognitive scientists (Schema, 1998, on-line serial).

Bartlett states that schema is knowledge already stored in memory, function in the process of interpreting new information. Additionally, schema is

"an active organization of past reactions, or past experience, which must always

be operating in any well-adapted organic response." Readers use their schema

or schemata in order to have a better understanding of new information.

Readers link new information to their previous knowledge, then interpret it

meaningfully (Anderson & Pearson, 1993, pp. 31-45; Clapham, 1996, p. 17).

Carrell and Eisterhold (1993) give the definition of schema as a process

of interpretation. It is guided by the principle that the input is mapped against

some existing schema and that all aspects of that schema must be compatible

with the input information. This principle results in two basic modes of

information processing: bottom-up and top-down.

Carrell and Eisterhold (1993), Richards (1994), and Siberstein (1994) say

that bottom-up, text-based, or data-driven occurs when linguistic input from the

text is mapped against the reader's previous knowledge. It is evoked by the

incoming data. The process of comprehension begins with the message received

until the intended meaning is arrived at. Top-down, knowledge-based, or

conceptually driven occurs when readers use prior knowledge to make

predictions about the data they find in a text.

Beside bottom-up and top-down processing, Manzo, A.V. and Manzo, U.

(1997) suggest another reading process which is called "the interactive model."

The interactive model proposes that readers apply both bottom-up and top-down

processing by using information gleaned from one process to inform and

advance the other. They state that interactive models appear to hold the most

promise as a basis for developing effective instructional strategies. Bottom-up

tends to be too narrow because it describes only what children do when they are first learning to read. Top-down also has shortcomings because it tends to describe what skilled readers do when they read familiar texts, but fails to account for how readers handle unfamiliar texts.

Siberstein (1994) defines that there are two kinds of background knowledge. First, formal schemata are involved with knowledge of rhetorical structures and conventions. Second, content schemata are involved with knowledge of the world beyond texts. This idea is different from Cohen (1990) in that Cohen (1990) classifies schemata into three types: content schema, language schema, and textual schema (details have been presented in the reading strategies part, p. 12).

Chandler (1995) suggests that schemata are stored in long-term memory and are employed when it is needed to interpret the experiences. Perception, comprehension, interpretation and memory are mediated by schemata. Moreover, schemata can be diagrammed as hierarchical networks of concepts and links. The following flow chart shows the way which schema is operated.

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┌─────────┐   ┌──────────────────┐        ┌──────────────────┐   ┌──────────┐   ┌───────────────┐
│ Input   │   │ Is there an active│       │ Generate         │   │ Long-    │   │ Output        │
│ New     │──▶│ schema for this   │ Yes──▶│ Inferences       │──▶│ Term     │──▶│ Information    │
│ Event   │   │ event             │       │ -Store Event     │   │ Memory   │   │ About Event   │
└─────────┘   └──────────────────┘        │ -Store Inferences│   └──────────┘   └───────────────┘
                       │                   └──────────────────┘
                       │ No                       ▲        ▲
                       ▼                          │        │
              ┌──────────────────┐        ┌──────────────┐
              │ Find Appropriate │        │ Create       │
              │ Schema           │        │ New Schema   │
              └──────────────────┘        └──────────────┘
                       │                          ▲
                       ▼                          │
              ┌──────────────┐   Yes              │
              │ Schema       │────────────────────┘
              │ Found?       │
              └──────────────┘
                       │        No
                       └───────────────────────────┘
```
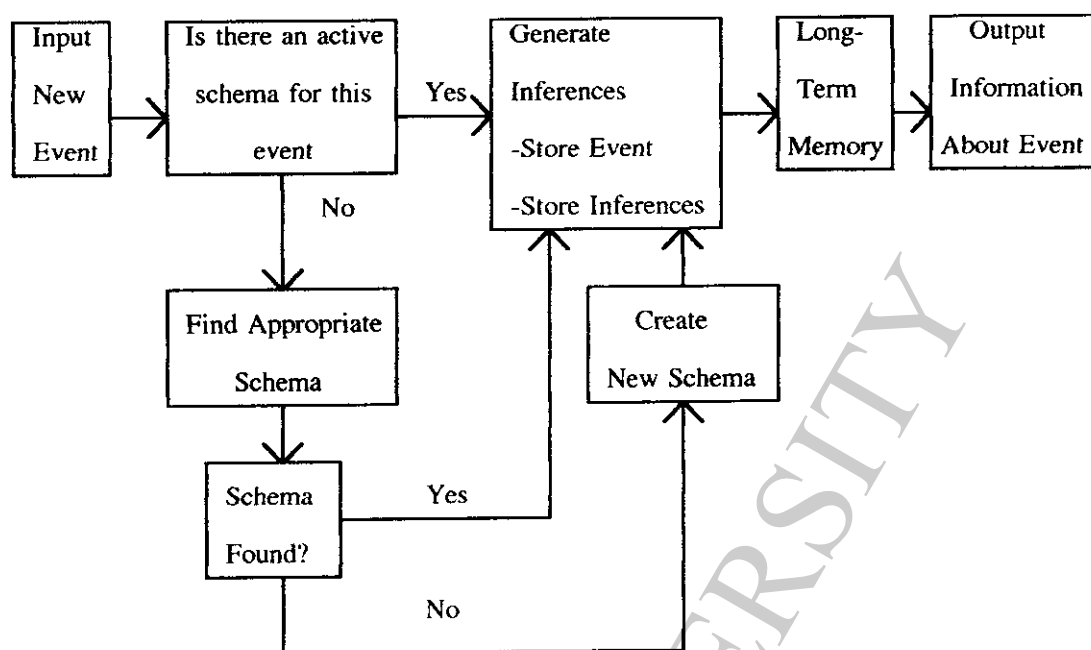
Illustration 3: How schema is operated

In addition to his perspectives towards schema theory, readers comprehend a text when they are able to apply a schema that gives it coherence. Schemata allow readers to make inferences about what they read. They fill in gaps in a schema which are not specified in the text. For instance, if the text says someone is brushing his/her teeth, it is known that he/she is using a toothbrush rather than a paintbrush. Thus, comprehension can be regarded as selecting schemata and confirming that they are appropriate for the text being read. A reader who cannot find a schema seems to find the text totally incomprehensible.

Vacca, R.T. and Vacca, J.A.L. (1996) characterize that schema reflects the experiences, conceptual understandings, attitudes, values, skills, and

strategies which readers bring to a text situation. They state that readers use schema activation which is the mechanism by which people access what they know and match it to the information in a text. They further state that there are at least three ways that schema influences comprehension and learning. First, schema provides a framework for learning. It allows readers to seek and select information that is relevant to their purposes of reading. Second, schema helps readers to organize text information. Finally, schema helps readers to elaborate information.

In summary, schema is the process which readers interpret new information by using their previous experiences, and knowledge of the world which are already stored in long term memory. After a period of time, new incoming information which are stable become another long term memory. In order to select the different types of modes, bottom-up, top-down, and/or interactive models, it depends on the readers' schemata as well as the incoming data. Therefore, readers who have richer schema on the given topics will understand the topics better (Alvarez & Risko, 1989, on-line serial).

1.5 Reading Comprehension and Metacognitive Theory

Metacognition is made up of two words, "meta" and "cognition." "Meta" is a Greek word means "beyond," "behind," or "above." Cognition refers to both what you know or perceive and the process of knowing or learning (Seyler, 1997, pp. 9-10). Thus, metacognition is the process of thinking about thinking. It refers to one's knowledge concerning one's own cognitive

processes or anything related to them. It is about what we know or do not know and how we regulate the learning (Metacognition, 1998, on-line serial; Huitt, 1997, on-line serial). Metacognition also fosters independence in learning by providing personal insights, building flexible and confident problem solving, and encouraging self-efficacy and pride (On purpose associates, 1998, on-line serial). According to the thesaurus of ERIC Descriptors, metacognition is knowledge or beliefs about factors affecting one's own cognitive activities. It also reflects on a monitoring of one's own cognitive processes, such as memory or comprehension (Pathways, 1998, on-line serial).

Blakey and Spence (1990) present three basic metacognitive strategies in which readers must use them in chronological order. They are: (1) connecting new information to former knowledge, (2) selecting thinking strategies deliberately, and (3) planning, monitoring, and evaluating thinking processes.

Livingston (1997) describes that metacognition refers to higher level of thinking which involves active control over the cognitive processes engaged in learning. Activities such as planning how to approach a given learning task, monitoring comprehension, and evaluating progress toward the completion of a task are considered as metacognition. In his concept metacognition consists of both metacognitive knowledge and metacognitive experiences or regulations. The first one, metacognitive knowledge, refers to knowledge that can be used to control cognitive processes. Metacognitive knowledge is divided into three categories: knowledge of person variables, task variables, and strategy variables. Knowledge of person variables refers to general knowledge about how human

beings learn and process information. Knowledge of task variables include knowledge about the nature of the task as well as the type of processing demands that it will place upon the individual. Knowledge of strategy variables include knowledge about both cognitive and metacognitive strategies, as well as conditional knowledge about when and where it is appropriate to use such strategies. The second one, metacognitive experiences, involve the use of metacognitive strategies or metacognitive regulation. Metacognitive strategies are sequential processes that one uses to control cognitive activities, and to ensure that a cognitive goal (e.g. understanding a text) has been met.

2. Related Literature Research

2.1 Research Dealing with Reading Abilities

In 1992 Pumirat studied the ability to analyze discourse types in English reading of Mathayom Suksa 6 (Upper Secondary Level) students, Bangkok metropolis. There were 480 subjects from 16 schools. The test was constructed to assess the students' reading ability in detail, description, compare-contrast, problem-solving, and reasoning. The findings showed that the overall students' reading ability was only 55.39 percent. Their abilities in the five skills were 62.07, 57.07, 55.67, 53.07, and 48.27 percent respectively.

At about the same time, Sitamui (1992) investigated English linguistic competence of Mathayom Suksa 6 (Upper Secondary Level) students in schools under the Jurisdiction of the General Education Department. The linguistic

competence in this study mainly was pronunciation, vocabulary, and grammar. The findings revealed that students' linguistic competence was 48.75 percent. When ranking the students' reading ability according to the criterion which was set, there were 58.85 percent who were below the criterion, 19.21 percent got the lowest criterion, 12.01 percent stayed in the mediocre, 7.31 percent got a good position, and only 2.62 percent received a very good position. In the following year, 1993, Wanpen also investigated sociolinguistic competence in English of the same target group. The findings were similar in the way that students' overall sociolinguistic competence was only 43.45 percent.

In 1994, Sutta investigated reading expository texts of the first-year graduate students in the Master of Arts in teaching programs at Kasetsart University, Bangkok. The test was constructed to measure six reading comprehension skills: main idea, detail, sequence, compare-contrast, cause-effect, drawing conclusion and predicting outcome. The findings were: (1) the samples' reading ability in reading expository texts did not reach the 80 percent criterion as indicated by the mean of the total scores of the six reading comprehension skills, and (2) the average reading ability of the subjects in using each reading comprehension skill in reading expository texts did not reach the 80 percent criterion.

The same year, Youngjermjantra (1994) investigated the reading ability to infer from English reading text of Mathayom Suksa 4 (Upper Secondary Level) students in schools under the Department of General Education in Pattani province. The samples were 312 students taking "Reading 1" courses and seven

teachers teaching these students. The thirty item test was used to measure the students' reading ability to infer the six reading comprehension skills: main idea, supporting detail, sequence, cause-effect relationship, character trait and predicting outcome. The results from the quantitative data revealed that not only the students' overall reading ability fell below 80 percent criterion, but also their reading ability in each of the sub-skills, too, fell below the 80 percent criterion.

2.2 Research Dealing with Reading Strategies

Kamwachirapitak (1989) studied the effects of reading strategies based on cognitive psychology. The subjects were forty-five Ramkhamhaeng University undergraduate students. There were three experimental groups: (1) group trained to use a rehearsal strategy, (2) group trained to use a rehearsal strategy and elaborational strategy, and (3) group trained to use a multiple strategy. The four reading comprehension skills were recognition, main idea, ·inference, and problem solving. The findings revealed that all of the reading strategies improved the students reading abilities.

Prapphal (1995) investigated the relationship between the reading strategies and language background of thirty Thai science students in performing English for academic purposes summary tests. The subjects were divided into four groups based on their language background (low and high proficiency), and reading strategies (less skilled and skilled readers). The results showed that there was no significant relationships between the two variables. However, the data suggested that training in top-level rhetorical organization of expository

texts might enhance Thai science students' reading comprehension. It was also noted that students proficient in general English could transfer their language skills across content.

In the same year, Pinkerd (1995) investigated reading strategies and reading comprehension of three Thai graduate and three Thai undergraduate students who read orally and silently using expository and narrative texts. The findings showed that the samples employed twenty-nine different reading strategies that were categorized within six main headings including: (1) negotiating meaning, (2) losing understanding, (3) utilizing language as a tool within a sentence, (4) tying information across sentences, (5) comprehending, and (6) reacting to the text. In addition, it was slightly different between orally and silently reading strategies. The findings also showed that graduate students were more effective readers than undergraduate students as shown by higher number of reading strategies used, higher comprehension scores, and more effective comprehension monitoring.

In Japan, Ono (1992) studied twenty Japanese ESL readers' reading strategies. They read short stories at different degrees of cultural proximity to students' backgrounds. The findings showed that intermediate and advanced students tended to use less comprehension-based, and more interpretation-based reading strategies than beginning level students do. The results also showed that the readers interpret a text on the basis of their personal experience, knowledge, perception, and beliefs.

In China, Han (1993) investigated the effects of reading strategies used and metacognitive awareness of eleventh-grade Chinese students' English language development. The forty-seven subjects reported that they used six basic reading strategies: (1) context clues, (2) prior knowledge, (3) picture clues, (4) repeated reading, (5) parts of speech, and (6) intuition. Among these reading strategies, context clues was the most frequently used category. The major factors that caused reading problems were lack knowledge of English vocabulary, idioms, semantic meanings, English grammar and culture. There was difficulty in defining topical concepts and keeping motivation. It was concluded that schema theory was a viable, supportable, and demonstrable approach to language development.

Similarly, Feng (1995) investigated the types of reading strategies used by adults native speakers of Chinese as they read easy and difficult texts in both Chinese and English. The findings revealed that they used twenty different reading strategies when reading in Chinese and English. Eight of the twenty reading strategies were found to be used more frequently in English than in Chinese. Text difficulty was found to play a key role in strategy use among Chinese subjects when they read in English and Chinese. The interaction of language and text difficulties was significant for four of the reading strategies, including use of context, key vocabulary, prediction, and visualization.

From the research mentioned, they point out that being aware of students' reading abilities and reading strategies helps teachers know how to improve and support students to become more effective readers. For instance, if students'

reading abilities are poor, providing long-term instructions and regular practicing on using reading strategies in different types of texts are necessary.