EFL LEARNERS' PERCEIVED USE OF READING STRATEGIES AND LEARNING OUTCOMES IN AN INPUT-POOR ENVIRONMENT

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EFL Learners' Perceived Use of Reading Strategies and Learning Outcomes in an Input-poor Environment

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Abstract

Language learning strategy researchers have repeatedly reported correlations between language learning success and use of particular learning strategies (e.g., Green & Oxford, 1995; Gu & Johnson, 1996; Huang & van Neersen, 1987; Wen & Johnson, 1997). However, the “good language learner” paradigm in both research and educational practices in the West (Stern, 1975; Oxford, 1990; Wenden, 1998) has not been widely translated to such a discrete skill area as reading, particularly with reference to students who learn to read for academic successes in input-poor environments. Several attempts have been made to uncover ESL/EFL students’ reading strategies and some preliminary findings have been pinpointed to students’ psychological processes in vocabulary leaning (e.g., Gu, 1994) or in text-processing (e.g., Young & Oxford, 1997; Zhang, 2001). However, the Chinese EFL learners, as a sociocultural entity, because of the sociocultural context in which they learn EFL, have not been sufficiently studied. They have also been unfairly labelled “rote learners” or “low-level decoders” in terms of strategy use because of
anecdotal observations (e.g., Kohn, 1992), although insufficient empirical evidence has been found to validate these claims. The present study was set up with a strong intent to explore some of the areas just mentioned. In particular, it was interested in examining how Chinese EFL learners perceived their use of reading strategies and how this perception of strategy use would correlate with their language learning outcomes. A sample of 312 tertiary-level arts and science students were requested to respond to an EFL Reading Strategies Inventory (EFLRSI). The results indicated that students of different proficiency levels performed differently on the EFLRSI, with the high-scores predominantly preferring using those strategies that are generally considered as more efficient and useful by successful readers and reading experts. The low-scorers' performance showed that they were not as aware of the reading strategies as were their high-proficiency counterparts. The results suggest that choice in using a strategy was not only influenced by psychological factors but also sociocultural variables (Field, 1985; Kohn, 1992; Parry, 1996; Zhang, Hvitfeldt & Skuja-Steele, 1999; Zhang & Skuja-Steele, 2002). Pedagogical implications are also discussed.

I. Revisiting Chinese EFL Learners

A special group of language learners by virtue of the unique environment in which they learn EFL, Chinese EFL learners are a special entity in at least two distinct ways, which are imbued with the sociocultural contextual variations: 1) Sociocultural characteristics: They are sociocultural different from EFL learners elsewhere; 2) Language learning and teaching approaches: The way EFL is learned and taught in school environments are different from what is usually practiced in other EFL contexts, for example, Belgium, Germany or France, where the target language input is relatively richer and the use of the language for daily communication among people from different continents or courtiers is more frequent. Before moving on to report on the present study, we need to review some of the key issues relate to the present study in the sections that follow.

1.1 Language Learning Strategies

Language learning strategy researchers have repeatedly reported correlations between language learning success and use of particular learning strategies (e.g., Green & Oxford, 1995; Gu & Johnson, 1996; Huang & van Nearsen, 1987; Wen & Johnson, 1997; Wenden, 1995).
1.2 Vocabulary Learning Strategies & Reading Strategies

Although there is relative abundance in research into language learners' learning strategies in the literature documented in English, the "good language learner" paradigm in both research and educational practices in the West (Stern, 1975; Oxford, 1990; Wenden, 1998) has not been widely translated to such a discrete skill area as reading, particularly with reference to students who learn to read for academic successes in input-poor environments, such as China. Several attempts have been made to uncover ESL/EFL students' reading strategies and some preliminary findings have been reported on students' psychological processes in vocabulary learning (Gu, 1994), word-solving in reading (Chern, 1993), or more broadly in text-processing (Young & Oxford, 1997; Zhang, 2001).

The Chinese EFL learners, in particular, as a sociocultural entity, because of the sociocultural context in which they learn EFL, have not been sufficiently studied. They have also been unfairly labelled "rote learners" or "low-level decoders" in terms of strategy use because of anecdotal observations (e.g., Kohn, 1992), although insufficient empirical evidence has been found to validate these claims.

1.3 Reading Strategy Use and Language Learning Outcomes

In other contexts, research has generally shown that reading strategy use has correlations with either language learning achievement or reading outcomes (Green & Oxford, 1987; Young & Oxford, 1997). With respect to Chinese EFL learners, some results have also been obtained about this relationship in oral skill learning (e.g., Huang & van Naerssen, 1987) or general language improvement (Wen & Johnson, 1997). Strategies for vocabulary learning have also been given some attention (Gu & Johnson, 1996; Zhang, 2002). However, reading strategy research has still remained a relatively latent area of research interest (cf. Haynes & Baker, 1993; Zhang, 2001).

II. Methodology

2.1 Research Questions

1) Did Chinese EFL learners report any use of reading strategies?
2) In their conceptualizations of reading processes as seen through their demonstration of reading strategies, did Chinese EFL students show any degree of reading strategy use?

3) Was there any relationship between perceived reading strategy use and EFL learning achievement? In other words, were there any differences among learners of differing proficiency levels in strategy choice?

2.2 Participants

The study involved 312 non-English majors at two universities in Northwestern China, comprising students from different disciplines, as shown in Table 1 below.

Table 1 Participant Distribution by Category in the Questionnaires Survey Study (N =312)

<table>
<thead>
<tr>
<th>Departments &amp; Specializations</th>
<th>Number of Subjects by Gender</th>
<th>Total</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business Management</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Communication &amp; Correspondence</td>
<td>13</td>
<td>17</td>
<td>30</td>
</tr>
<tr>
<td><strong>Economics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economics</td>
<td>13</td>
<td>27</td>
<td>40</td>
</tr>
<tr>
<td>Statistics &amp; Accounting</td>
<td>29</td>
<td>16</td>
<td>45</td>
</tr>
<tr>
<td>Investment Economics</td>
<td>31</td>
<td>10</td>
<td>41</td>
</tr>
<tr>
<td>International Trade</td>
<td>9</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td><strong>Geography</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atmospheric Geography</td>
<td>14</td>
<td>16</td>
<td>30</td>
</tr>
<tr>
<td><strong>Chemistry</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemistry Engineering</td>
<td>23</td>
<td>4</td>
<td>27</td>
</tr>
<tr>
<td>Material Physics</td>
<td>16</td>
<td>3</td>
<td>23</td>
</tr>
<tr>
<td><strong>Biological Engineering</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biochemistry</td>
<td>8</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Biotechnology</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Biology</td>
<td>9</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td><strong>Computer Science &amp; Engineering</strong></td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sciences</td>
<td>N=105</td>
<td>N=53</td>
<td>N=158</td>
</tr>
<tr>
<td>66.5%</td>
<td>33.5%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Social Sciences</td>
<td>N=80</td>
<td>N=74</td>
<td>N=154</td>
</tr>
<tr>
<td>51.9%</td>
<td>48.1%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>13</td>
<td>185</td>
<td>312</td>
</tr>
</tbody>
</table>
2.3 Instrument

A survey questionnaire – EFL Reading Strategy Inventory (EFLRSI)

Table 2 Categorizations, Dimensions and Clusters of EFL Readers’ Reading Strategies in the EFLRSI

<table>
<thead>
<tr>
<th>Strategy Categories</th>
<th>Dimensions and Clusters of Strategies</th>
<th>No. of Items</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Metacognitive Domain</td>
<td>A) Regulating Textual Management</td>
<td>8</td>
<td>.6586</td>
</tr>
<tr>
<td></td>
<td>B) Monitoring Comprehension</td>
<td>8</td>
<td>.5212</td>
</tr>
<tr>
<td>B. Cognitive Domain</td>
<td>C) Negotiating Macrotextual Meaning</td>
<td>7</td>
<td>.6313</td>
</tr>
<tr>
<td></td>
<td>D) Making Ineffective Meaning-constructing Attempts</td>
<td>6</td>
<td>.5969</td>
</tr>
<tr>
<td></td>
<td>E) Vocabulary Treatment</td>
<td>16</td>
<td>.5436</td>
</tr>
<tr>
<td></td>
<td>E1) Detailing</td>
<td>5</td>
<td>.5132</td>
</tr>
<tr>
<td></td>
<td>E2) Using Dictionary</td>
<td>4</td>
<td>.4664</td>
</tr>
<tr>
<td></td>
<td>E3) Guessing at Unknown Vocabulary</td>
<td>7</td>
<td>.6512</td>
</tr>
<tr>
<td></td>
<td>F) Negotiating Microtext-specific Meaning</td>
<td>4</td>
<td>.5294</td>
</tr>
<tr>
<td></td>
<td>G) Using Intralinguistic Devices</td>
<td>6</td>
<td>.8550</td>
</tr>
<tr>
<td></td>
<td>H) Processing Intratextual Input</td>
<td>7</td>
<td>.7361</td>
</tr>
<tr>
<td></td>
<td>I) Resorting to First Language</td>
<td>4</td>
<td>.5234</td>
</tr>
<tr>
<td></td>
<td>J) Enhancing L2 Proficiency</td>
<td>5</td>
<td>.5164</td>
</tr>
<tr>
<td>C. Social-Affective Domain</td>
<td>K) Mobilizing Emotive Facilitation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.4 Procedures

Randomly sampled participants (N=350) were requested to complete the EFLRSI in their own classrooms with the assistance of their reading teachers within 20 minutes. However, only 312 were finalized as valid.

2.5 Analyses

Descriptive statistics, correlation analysis, ANOVA, and multiple regression analysis resulted are reported in the following section and some preliminary discussion is also included.
III. Results and Discussion

Of all the categories of strategies (RGTXTM= Regulating textual management; MONITO= Monitoring comprehension; NMTM= Negotiating macrotextual meaning; VOCDET= Vocabulary detailing; USEDIC= Using dictionary; GUESSG= Guessing at unknown vocabulary; NMTXTM= Negotiating microtext-specific meaning; INTRAL= Using intralinguistic devices; INTRAT= Processing intratextual input; RESTL1= Resorting to first language; ENHANC= Enhancing L2 proficiency; EMOTIV= Mobilizing emotive facilitation; INEFFE= Making ineffective meaning-making attempts), vocabulary-detailing and guessing at meaning turned out to be predictive of EFL learners’ learning outcomes, explaining about 22% of the variances, as Table 2 shows.

Table 3 Multiple Regression of the Variables in the Questionnaires

<table>
<thead>
<tr>
<th>Variables</th>
<th>Multiple R</th>
<th>R²</th>
<th>R² Change</th>
<th>Beta</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>DETAIL</td>
<td>.439</td>
<td>.193</td>
<td>.065</td>
<td>.198</td>
<td>10.260*</td>
</tr>
<tr>
<td>GUESSN</td>
<td>.468</td>
<td>.219</td>
<td>.026</td>
<td>.177</td>
<td>4.079*</td>
</tr>
</tbody>
</table>

Dependent Variable: CET2
Notes: N = 312 CET2 = College English Test Band-2
DETAIL= Vocabulary detailing
GUESSN = Guessing at unknown words
**: Significant at the level of p<.001
*: Significant at the level of p<.05

The statistics seem to indicate that “vocabulary-detailing”, “guessing at unknown words”, and “self-evaluation of L2 reading ability” are predictors of EFL achievement. “Self-evaluation of L2 reading ability” is a one-entity variable, it sufficed that no further statistical analysis was performed. Nevertheless, as was stated earlier in Chapter Four and also in this chapter, the first two dimension variables are the grouped or clustered categories of strategies which include several specific strategies under each. These strategies, which are characteristic of the dimension variables, needed to be reconsidered in order to examine which specific strategies were orchestrated as predictors of EFL achievement.
All the strategies under “vocabulary detailing” underwent another operation of multiple regression, and then all the strategies under “guessing at unknown words” were entered stepwise based on the strength of correlations. The results of the first two procedures show that, of all five “vocabulary detailing” strategy items, one strategy item, “analyze word structure to get meaning” seems to show its predictiveness of CET2, explaining 11.2% of variance (multiple $R = .335$, $F = 16.012$, $p < .001$).

When the seven strategy items under “guessing at unknown vocabulary” were entered into multiple regression model stepwise, results showed that two strategy items turned out to be significantly predictive of the subjects' EFL achievement on the CET2 — “willing to guess and continue reading”, and “associate new words to morphologically similar words”. When the first strategy entered, multiple $R$ was .278 ($F=10.575$, $p < .001$), and when “associate” strategy entered, Multiple $R$ was .346, $R^2$ was changed from .077 to .199, which means there was a change of .047 ($F=5.956$, $p < .05$).

3.1 Lexical Knowledge and Reading Comprehension

Since “vocabulary detailing” as a cluster of strategies includes “vocalize/read aloud words to understand”, “mentally sound out parts of words”, “try to understand each word”, “analyze grammatical class of word”, and “inference word meanings by analyzing word forms”, and these specific strategies were all the necessary actions to be taken by the EFL readers under the condition that they were not permitted any use of references or resources for comprehension to occur, the predictive effects of this category of strategies seem to be well-grounded. Thinking about asking people for help or using a dictionary effectively for meaning clarification could be a good learning strategy in a related learning situation where enough relaxation and freedom are accessible, but these strategies might not work in an examination setting (M. Ruddell, 1994; Purpura, 1998).

These strategies are usually regarded as effective strategies in that they are generally attributed to the second/foreign language learners who are at the advanced levels of foreign language learning (Hosenfeld, 1979; Carrell, 1989b), though some of these strategies might be more language-based than meaning-based (Block, 1986; Vann & Abrahnam, 1990; Carrell, Carson, &
Similarly, lexical constraints for reading comprehension in L1 are also widely documented in the literature (e.g., M. Ruddell, 1994).

However, in the Chinese context, EFL learning and teaching involve not only the learning or teaching of the language per se, but also about the language, meaning the teachers usually begin their teaching from a theoretical vantage point, teaching the students a lot about the theoretical aspects of the language. Students start learning English by first learning the International Phonetic Alphabet (IPA), for example. This theoretical knowledge, a kind of metalinguistic (task) knowledge (Bialystok & Ryan, 1985; Bialystok, 1991), about the language, might have helped them out of difficulty, as the subjects generally do not accept meaning ambiguities in their reading. Such a phenomenon is also documented in Wen and Johnson (1997), who investigated the advanced Chinese EFL English majors' general learning strategies, and Gu and Johnson (1996), who focused their study on vocabulary learning strategies and language learning outcomes. In the Wen and Johnson (1997) study, they report a strong direct correlation between the subjects' English achievement as measured by the Graded Test for English Majors, Band-4 (GEM4) and certain strategies the subjects used. The subjects' EFL achievement is directly influenced by vocabulary and is negatively affected by tolerance of ambiguity (i.e., guessing) strategies. Gu and Johnson (1996) also report that vocabulary size of the subjects is a determining factor for their EFL achievement. Even earlier, when Huang (1984) investigated Chinese EFL learners' oral skills, she found that functional practice and reading in English are strongest predictive factors for learners' achievement, lending support for Bialystok's claim (1978, 1979).

It seems that this kind of activity would facilitate the readers, and hence test-takers' accomplishment of the tasks more efficiently. However, given the constraints imposed by the examinations, they did not have any other means to gain an accurate understanding of the meaning of the reading, they had to work out the meaning of unknown words by guessing. This is why guessing also entered the regression model, as is discussed in the section below.

3.2 Role of Guessing at Unknown Words in Reading Comprehension

Guessing at unknown words is also a cover term for a cluster of strategies under which there are seven strategies. They are more metacognitive than cognitive if we refer to the definitions
of these theoretical dimensions. But as a specific processing strategy, this strategy is included in the cognitive strategies domain. In the examination setting, besides using vocabulary-detailing strategies for meaning construction, the subjects often used strategies under the category of “guessing”. These strategies include the following: skipping unknown words, being willing to guess and go on, guessing what the word might mean and go on, guessing what the word might mean and reread, guessing the meanings of all the unclear words, creating semantic networks in mind, and associating a new word to a morphologically similar word. In fact, these strategies are inherently effective strategies as reported in the literature (Wenden, 1986c, 1991a; O’Malley & Chamot, 1990; Gu & Johnson, 1996; Wen & Wang, 1996; Goh, 1998). This explains why these mentalistic manoeuvres of the subjects in this study accounted for about 11% of the total variances.

At first sight, there seems to be an inconsistency between the strategies under the category of “guessing” and the strategies belonging to the category of “vocabulary-detailing”. However, if we examine the specific strategies under each of the two categories, we can find that the two categories are complementary to each other. In other words, while the subjects are making great efforts to construct meaning by working out an accurate understanding of the passages that they are reading, they also use other strategies to negotiate meaning, strategies which are more meaning-based than lexical-linguistic centred.

Meanwhile, we must remember that the general EFL instructional situation is such that the subjects also choose “analysing grammatical structures of sentences when comprehension difficulties arise” as their preference in their belief system. This grammatical orientation and lexical concern stimulated by their willingness to guess while reading seems to have significant impact on their EFL achievement in the CET-2. All this appears to suggest that the Chinese EFL learners/readers generally like to combine the linguistic and conceptual strategies to negotiate meaning in their reading. They either analyse word forms, or sentence structures, or inference meaning through guessing, as found in their think-aloud protocols.

This finding offers us a rather complex picture of the EFL reading scene in China, which is starkly different from what Field (1985) and Kohn (1992) have described. While some researchers hold the view that readers who focus on the grammatical/syntactic aspect of the
written input is evidence to show these readers are using good reading strategies to negotiate meaning, and lexical processing is a necessary first step toward larger discourse interpretation, which involves an automaticity process (e.g., Perfetti & Lesgold, 1979; Haynes, 1988; Haynes & Carr, 1990; Stanovich, 1980; Eskey, 1988; Grabe, 1991; McLaughlin, 1981a; Coady, 1991, cited in Coady, 1997; Perfetti, Zhang, & Berent, 1992; Gu & Johnson, 1996); others believe that strategies involving "sound-letter, word-meaning, sentence syntax, and text details" are "local" strategies and that strategies pertaining to "background knowledge, text gist, and textual organisation" are "global" strategies (Carrell, 1989a, 1989b; Block, 1986). If put into the first perspective, the Chinese EFL readers are on the right track to becoming effective readers as long as their reading speed is not slowed down. But if framed into the latter view, the Chinese EFL readers could be classified as generally more local than global. While it is true that this process is conducive to the readers' accurate and complete understanding of the reading task, the reading speed tends to be affected (Kohn, 1992; Parry, 1995, 1996; Zhang, 1996). Then the question is whether some strategies used by some readers are still good strategies, as strategies are not "good" in and of themselves, depending on how learners effectively and flexibly use them (Oxford, 1993; Cohen, 1996; Cohen & Weaver, 1998).

When we look at this issue afresh from the perspective of the particular social, cultural and instructional context (e.g., Parry, 1995, 1993; Devine, 1987, 1988; Steffensen, 1987; Field, 1987; Balota, Pollatsek, & Rayner, 1985; MacIntyre, 1994; R. Ruddell & Urnau, 1994; McKay, 1996; McDonough, 1999), the effectiveness of certain strategy use could be understood differently. Some strategies extolled in one study tend to be devalued in another. Field (1985) and Kohn (1992) contend that these strategies used by the Chinese EFL readers are low-level decoding strategies. Particularly, Kohn (1992) states that Chinese EFL teachers encourage some reading habits that their American counterparts usually discourage. The results of this section of the study and the results obtained through analysing their think-aloud and interview protocols support neither Field's (1985) nor Kohn's (1992) observation about the advanced Chinese EFL readers. It appears that Both Field and Kohn have generally overlooked the role that L2 linguistic ceiling plays, which is the hedge preventing EFL readers' meaning-construction. Moreover, they seem to have ignored the role that cross-cultural differences or their L1 literacy traditions play in understanding the phenomenon (Clark, 1980; Parry, 1993). Learning to read in a second or foreign language is intrinsically different from learning to read in L1 in the
beginner's stage, though in perception, reading in any language involves the same process and is intended for meaning-making — the ultimate goal of taking up a reading task (Mackay, 1979; Eskey, 1986, 1988; Liow & Poon, 1998). A point that might be missing in both Field (1985) and Kohn (1992) may be the differences in L₁ and L₂ learning contexts. The fact that L₁ readers have a relatively large aural and oral vocabulary makes the two distinctively different. For further comments on this point, see Singer (1981) and Taft (1991).

According to Field (1985), the advanced Chinese EFL readers do not use abstract conceptual strategies in their reading. Rather they are very local readers, using mainly decoding strategies that are characteristic of readers of that particular language. Kohn (1992) makes a similar point that the reading strategies (literacy strategies, in his words) of the Chinese EFL readers could not manage to meet the challenges of the many reading assignments given by their professors if they were put into American university academic settings. Data from this study show that although the reading strategies that the Chinese EFL readers use are not poor reading strategies, as, intrinsically, how these strategies are orchestrated and used in reading tasks should be more relevant to reading efficacy, the flexibility of strategy use and the necessity for developing a faster reading speed to meet social or contextual challenges should be more important to these EFL readers.

However, if they learn to read in EFL just for the purpose of using the language in the Chinese context, mostly reading some kind of scientific literature or doing some kind of translation from the target language into the first language or vice versa, then reading for accuracy is as important and necessary as obtaining the gist of a text, as is required by the National Syllabus (1986/1991). Therefore, it becomes essential that they develop a strong awareness as to when to read with speed to get the main information and when to read for accuracy, that is, how to use strategies flexibly in different reading situations.¹

Even though the multiple regression results show that the two categories of vocabulary treatment strategies are strong predictors of the Chinese EFL readers' general EFL

¹ National College English Syllabus for the Arts and Sciences (1986, revised 1991) requires that students develop competence and skills in a foreign language in five skill areas: listening, speaking, reading, writing and translating (L1 to L2 and vice versa). Also see Lu, Shen, Wu, & Kong (1987).
achievement, which seems to indicate that the Chinese EFL readers are generally blocked by their relative insufficiency of lexical resources, it should not be construed that they are processing the language at the lexical level only. Processing only at the lexical level would not result in the readers' comprehension of the larger discourse, as evidenced in several studies (Laufer & Sim, 1985; Laufer, 1997; Parry, 1997; cf. Field, 1985). In an earlier study, Laufer and Sim (1985) found that in interpreting texts, students tend to regard words as landmarks of meaning, but words are not isolated units in a text. More recently, Batia Laufer (1997) further argues for the importance of vocabulary in second/foreign language reading:

No text comprehension is possible, either in one's native language, or in a foreign language, without understanding the text's vocabulary. This is not to say that reading comprehension and vocabulary comprehension are the same, or that reading ability is determined by vocabulary alone. Reading comprehension (both in L1 and L2) is also affected by textually relevant background knowledge and the application of general reading strategies, such as predicting the content of the text, guessing unknown words in context, making inferences, recognising the type of text and text structures, and grasping the main idea of the paragraph. And yet, it has been consistently demonstrated that comprehension is strongly related to vocabulary knowledge, more strongly than to any other components of reading. (Laufer, 1997, p. 20)

It is evident that many factors function in helping the reader's comprehension. Moreover, successful reading necessarily involves automatic processing of the lexicon, lemmas (Levelt, 1989), syntactical structures and the larger units of the written language (Perfetti & Lesgold, 1979; Adams, 1980; Perkins, 1983, 1998; McLaughlin, 1983; Zimmermann & Schneider, 1987; Perfetti, et al., 1992; Liow & Poon, 1998). It is a coordinated activation of both the declarative, procedural and conditional knowledge (Anderson, 1985; Lipson, Paris, & Wixson, 1983; Carrell et al., 1998). This means that readers have to use their metacognitive knowledge to its maximum potential to arrive at comprehension (Flavell, 1981; Baker & Brown, 1984b; Schraw, 1998). Block (1992) concludes her study, stating that “ESL reading teachers who focus on developing vocabulary instead of on building cognitive and metacognitive resources may similarly reinforce their students' word-processing style” (p. 338). Our subjects' think-aloud protocols offer abundant process data which demonstrate that vocabulary treatment is one of the many processing strategies in their strategy repertoire. The subjects' interview protocols
show that they know what EFL reading is, and what their important focus should be (see also Parry, 1997). The correlation index between their CET-2 achievement and their strategies also supports this claim. In fact, seven of the 13 clusters of strategies in the metacognitive, cognitive and social-affective domains had correlations with their EFL achievement. This might suggest that they have these metacognitive, cognitive and social-affective strategies that might work when necessary, but some of them do not make direct contributions to their EFL achievement. Nevertheless, since they have varying degrees of metacognitive awareness as to when they should have the vocabulary to build their reading comprehension and when not, the entry of this category of reading strategies is reasonable.

If we look at their metacognitive person knowledge about EFL reading, we see that beliefs other than vocabulary are less strongly favoured by the subjects on the questionnaire, but this does not mean that the subjects do not have them at all. Beliefs like paying attention to the logical relationships between paragraphs and relating reading tasks to schemata (Rumelhart, 1980; Carrell & Eisterhold, 1983) are not as commonly found in their responses to the questionnaires as their beliefs about vocabulary; that is, the response rate to such items is relatively low, which seems to show that, as a whole, the subjects do not report that they resort to schema knowledge as often as they should. But the question is how much schema/prior knowledge are they able to bring to their reading tasks? Or how much can they demonstrate their knowledge about the culture with which the target language grows?

In effect, the subjects’ think-aloud and interview data shows that the readers have different levels of schemata knowledge, and these are seen through their use of different strategies by the subjects of differing proficiency levels. The difficulty level and the nature or the topic of reading tasks interact with the readers’ proficiency levels. The familiarity of the reading task tends to give them the chance to activate their prior/schema knowledge. In other words, their restricted linguistic proficiency might highly possibly “short-circuit” their ability to call this knowledge into action to help them out of difficulty. And because of this, poor readers are confined to relatively low language-based reading strategies, which are predominately their prime choices, rather than those which are favoured by the readers who are generally more proficient in the target language. But for the poor readers the preferences for metacognitive or global textual regulating or management strategies over local ones (Block, 1986; 1992) are not
as onerous as it is for them to solve the more challenging obstacles like unknown vocabulary or complicated sentence structures in their reading comprehension processes (cf. Goh, 1998). This finding also conforms to the finding by several researchers investigating the relationship between these basic linguistic forms, vocabulary and reading comprehension (e.g., Eskey, 1988; Qi & Wang, 1988; Gu & Johnson, 1996; Coady & Huckin, 1997; Gibson, 1997; Huckin & Coady, 1999).

The reason why vocabulary treatment as one major variable in their strategy repertoire tends to dominate both the good and the poor readers’ process in approaching a written text at this stage of L₂ reading development is evident, though good readers use contextual clues to guess word or text meanings through inferences more often than the poor readers. This is further elucidated by the subjects’ background variable data. Their belief priority as reflected in the background questionnaire is consistent with their responses to the EFL-RSI, on which they also choose vocabulary treatment strategies as their preferences. “Vocabulary detailing” and “guessing at unknown words” are two categories/clusters of strategies that are predictive of their EFL achievement, complementing each other, as the multiple regression results suggest. Although this finding is concomitant to the published literature on the role of vocabulary in reading comprehension (Gu & Johnson, 1996; Wen & Johnson, 1997; Goh, 1998), all this has to be checked against the theoretical framework that has been adapted for this study.

Although the “bottom-up” reading theorists (Gough, 1972; LaBerge & Samuels, 1874; Carver, 1977/78) are criticised for their taking too linear an orientation in interpreting the reading process, their theories are found to be adequate for accounting for the low-proficiency level readers’ reading behaviours. If we examine the test (CET2) as a measurement of the EFL proficiency of the subjects in this study, we find that most of them have a vocabulary size of about 3,000, who still belong to the low-level group when they are compared with their counterparts in ESL contexts. Therefore, bottom-up approach might be more suitable for them. The so-called “top-down” models (Goodman, 1967; Smith, 1982), albeit favoured by some researchers in line with this reader-based approach (Coady, 1979; Field, 1985), fail to offer much insight into the poor, or low-level, readers’ mental processes (Eskey, 1979, 1988; Barnett, 1989; Bernhardt & Kamil, 1995).
The interactionists can account for more of the good reader behaviours at this stage, not only in first language reading but also in foreign/second language reading (Eskey, 1986, 1988; Carrell, Devine, & Eskey, 1988; Coady, 1991, 1997). In J. R. Anderson's cognitive theory (1995), a three-component model of language processing is initiated to explain the intricate mental processes of information-processing and construction — conceptual processing, parsing and utilising. This means that in language processing, there are three mini-stages. Perceptual processing is the first stage which involves the retention of portions of new text in STM so that they can be processed for meaning. Parsing is the second stage where the construction of meaning-based representations of new information occurs. The last stage is utilisation, which means the reader relates a mental representation of a text to declarative information stored in LTM. This is almost identical to his classification of knowledge structure of a person into declarative and procedural knowledge, as we discussed in Chapter Three. This tripartite process of text processing is further supported by the data, as illustrated in Figure 7.2.

While most researchers find that successful L2/FL readers can correctly guess the meanings of unknown words while reading (e.g., Liu & Nation, 1985; Hosenfeld, 1984; Block, 1986; Carrell, 1989a), others question the significance of doing so, as guessing in its own right rarely helps comprehension in a constrained context (Laufer, 1997). This might be a better explanation of why both clusters of strategies (vocabulary-detailing and guessing) entered the regression equation, suggesting that guessing without achieving certain L2 proficiency level is impractical. As also uncovered from the interviews, these EFL readers do not guess as often as they are supposed to do because they are suspicious of the usefulness of contextual clues, which might be of little help because of their limited L2 proficiency and because of the challenging nature of the reading tasks. Their metacognitive awareness of a lack of lexical resources, that is, their low level of proficiency in L2, and some other factors such as cultural and literacy traditions that are part and parcel of their schooling, further complicate their choice of both "detailing" and "guessing".

With reference to the issue of guessing in reading, as discussed earlier, Laufer (1997) presents three kinds of lexical plights in second language reading: words the reader does not know; words the reader thinks he knows; and words the readers cannot guess. Laufer's argument is that non-existent contextual clues, unusable contextual clues, misleading and partial clues and
suppressed clues are all possible constraints on EFL readers. Haynes and Baker's (1993) conclusion about their study on Chinese ESL readers in the USA is that the most significant handicap for L₂ readers is not severe lack of reading strategies, but insufficient vocabulary in English. Other explanations could be found in their L₁ literacy tradition and how L₂ is taught, as discussed by Parry (1995, 1996).

IV. LIMITATIONS AND CONCLUSION

Due to the research design, several limitations are obvious. First, relying on participants’ self-report, the statistics can only offer us some inferential results. We are not in a position to claim that this is exactly what the participants do in their EFL reading. Second, due to the small sample size relative to the immense EFL learner population, the generalizability of the study is severely restricted.

Therefore, tentative conclusions drawn seem to be 1) that there were correlations between learners’ perceived use of reading strategies and EFL learning outcomes; 2) that Chinese EFL learners differed in strategy choice along the EFL proficiency line, with, overall, better learners having clearer purpose of using the reading strategies for effective meaning-making and the poor learners being disadvantaged in this respect; 3) self-evaluation of L₂ reading ability and vocabulary strategies contributed their greatest share in explaining EFL learning success.

At this juncture, we may glean suggestions from the data that it might be necessary to see the link between this overall awareness of the global features of the reading task and the approach to solving the problems in their reading (Wenden, 1998). It seems that even if the readers have metacognitive awareness of the reading task, the specific problems in reading do not seem to have been solved by this metacognitive knowledge, as is revealed in their think-aloud protocols. This is in agreement with a study by Perkins, Bruten, and Pohlmann (1989), which shows that even if a reader has good metacognitive strategies, which she or he uses in L₁, these will not be of much help in L₂ before a solid language base has been reached.
References


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