The Effect of EFL Students’ Reading Styles on their Reading Comprehension Performance

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Kirby’s theory of reading (1988) was used to investigate differences between English as a Foreign Language (EFL) students at two levels of reading comprehension performance (i.e., meaning memorization and meaning generation) with respect to their reading styles. Forty-eight English major senior students at Sultan Qaboos University (SQU) participated in the study. After reading two texts, students performed three tasks for each text. The first, writing a summary, aimed at measuring meaning generation; the second, description of strategies used in reading, aimed at identifying reading styles; the third, answering the Sentence Verification Technique (SVT) Test, aimed at measuring meaning memorization. Results revealed the presence of the global and analytic reading styles and the absence of the synthetic style. The levels of students’ performance on meaning memorization and generation were low. No significant differences were found between the two styles with regard to meaning memorization. There were slightly significant differences in favour of the global style with reference to meaning generation.

INTRODUCTION

For many students, reading is by far the most important of the four language skills in a second (SL) or a foreign language (FL). Certainly if we consider the study of English as a FL around the world – the situation in which most English learners find themselves – reading is the main reason why students learn the language. In order to succeed, SL or FL readers should possess solid reading proficiency. Thus, effective reading in SL or FL is critical (Carrell 1989: 1).

Research on effective reading in FL and SL has emphasized the importance of identifying readers’ comprehension problems such as preserving meaning in memory after reading a text (meaning memorization), and recalling ideas and main ideas included in the text (meaning generation). Research in reading comprehension has identified two major approaches to sources of reading problems (Kirby 1988: 232). The first is the traditional approach which emphasizes that poor readers either lack specific skills (e.g., recognition of words, encoding meaning of sentences, or making inferences), or they do not try hard enough (a question of motivation). This implies that what poor readers need to do is to try harder and practice the skills in which they are poor. In other words, the only correct path toward competent reading comprehension performance consists of improving skills.

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The second approach emphasizes the importance of reading strategies and styles. Strategies, in reading, consist of the decision processes that lead one to carry out reading skills. The habitual use of a similar class of strategies is referred to as a style (Schmeck 1989: 7). For instance, strategies for the word recognition skill may be subdivided into two types. The first may include: skipping the word, guessing or asking somebody else. The habitual use of these strategies may indicate a global reading style. The second type may include: sounding out the word, looking it up in a dictionary and using context to determine the meaning of unknown words. The habitual use of these strategies may indicate an analytic reading style. Thus, this strategic approach does not deny the importance of skills, practice and motivation. It suggests that poor readers either already possess the required skills to be good readers or could develop them relatively easily if they were taught to adopt the correct strategy for reading.

The present study was prompted by observations made by EFL teaching specialists in the English faculty at Sultan Qaboos University (SQU), Oman. It has been observed that students, though in their final year of study, encounter some problems in comprehending course reading materials. This study, which adopts the strategy and style approach to reading, aims to identify some of the reading comprehension problems of these students in relation to their reading styles. This may help shed some light on potential solutions to the students' reading comprehension problems in order to enhance their reading performance.

THEORETICAL BACKGROUND

The present study is based on Kirby's theory of reading (1988) which relates, for the first time, reading styles to reading performance. Kirby identifies three distinct reading styles analytic, global, and synthetic. Analytic readers adopt a bottom-up (text-based) approach to reading in which the focus is on the identification of words rather than the extraction of meaning. This style is characterized by strategies which orient the reader to the details of the text. It relies too much upon the information on the page and not enough upon either prior knowledge or the generation of deep new meaning. Global readers, in contrast, adopt a top-down (concept-driven) approach to reading. This style makes use of strategies to avoid dealing with the details of the words, or the details of ideas to be identified. Strategies employed in this style rely too much upon prior knowledge and rely upon too small a subset of information presented in the reading task. Both the global and analytic styles can be due to the lack of appropriate skills. Both of them are, according to Kirby, ineffective approaches to reading. Moreover, neither is equal to the other in value because each would accomplish some aspects of reading successfully and others unsuccessfully. Synthetic readers on the other hand, adopt an interactive approach to reading in which they integrate the more appropriate aspects of the two former styles. In this synthetic style, strategies have become more flexible, in that control is able to be shifted from one to the other during task performance. In other words, the synthetic style is not just the combination of pre-existing strategies, but rather the integration of them.

Kirby has demonstrated that the reading strategies and styles included in his theory parallel learning strategies and styles used by other researchers. The analytic and synthetic styles correspond to the surface and deep styles respectively in Biggs (1988), Entwistle (1988) and Schmeck (1988). The global and analytic correspond to the holistic and atomistic styles respectively in Marton (1988). The global, analytic and synthetic styles correspond to the holist, serialist and versatile styles respectively in Pask (1988).

It is possible to describe reading styles either from measures taken during the reading, or from measures which are relatively remote from the reading task. Kirby prefers the former type since it refers to how readers go about the reading task, rather than how they go about the world in general. Thus, such measures may yield strong relationships with reading performance. This is consistent with the experiential (or phenomenological) view which depends on the student's subjective description of his direct relation to the task (Marton 1988; Säljö 1988).

In the present study, the three reading styles (analytical, global, and synthetic) will be identified through the analysis of students' self-reports of the strategies they used during different reading tasks in different situations. This method is consistent with Marton's view that an approach or style must involve certain consistency across different tasks and across situations (Marton 1988).

On the other hand, Kirby approaches reading performance from the perspective of information processing. He suggests that reading entails processing information through eight hierarchical levels: features, letters, sounds, words, chunks, ideas, main ideas, and themes respectively. “Features” are the lines or curves of which letters are composed. “Letters” are visual patterns composed of features. “Sounds” refer to sounding out letters or letter combinations. This level is optional. “Words” are stored in long-term memory and must be accessed through their visual or phonological (sound) features. The fifth level, “chunks”, refers to grouping words into “units of meaning”, i.e., propositions. This basic unit of comprehension, a meaning-based representation, is retained in long-term memory, of the original sequence of words. According to O'Malley & Chamot (1990: 34), although the representation is an abstraction of the original sequence of words, it can be used to recreate the original sequence or at least the intended meaning of the sequence. This level, which Kirby calls “simple comprehension”, is, then, in our view, a “meaning memorization” level of reading performance.

The sixth level is the “ideas” or micropropositions. Unlike the previous levels, ideas are no longer exact replicas of what is on the page; instead, they are abstractions
of meaning. The set of ideas in a text represents all of the meaning expressed in the text. In contrast, the seventh level, that is, “main ideas” or macropropositions, represents a distillation of what has been represented in the text. The main ideas of the text provide “a summary” of what it says, that is, the gist of the text, and have to be constructed from the ideas presented in the text. Both the sixth and seventh levels are concerned, in Kirby’s view, with “meaning generation.” Themes, the final level, are interpretations of what the text is trying to say and often are not stated explicitly in the text.

Information processing, according to Kirby, can be occurring at all these eight levels simultaneously. In order to work at a particular level smoothly, it is necessary for the lower levels to function automatically. For instance, if the reader is having difficulty in identifying words (level 4), then grouping words in units of meaning (level 5) can become very difficult.

It is noteworthy that Kirby emphasizes that strategies and styles are involved at all levels of information processing in reading. He reviews research, conducted with readers of English as a first language, which showed the effect of styles at four levels, i.e., words, ideas, main ideas and themes respectively. From this research, he concludes that neither the analytic nor the global style is adequate for proper reading performance. We believe that many EFL students may have problems at these levels.

Reading performance, in the present study, is limited to three levels: level five (i.e., meaning memorization) and levels six and seven (i.e., meaning generation). Meaning memorization represents what Kirby calls the simple level of reading comprehension performance whereas meaning generation represents what he calls the skilled level of reading comprehension performance. With regard to the measurement of these two types of performance, Kirby does not refer to any measure for the meaning memorization type. As for the meaning generation type, Kirby refers to measures used by various researchers (e.g., instructing subjects to select important ideas, summaries, lists of objectives, tables, and maps).

The present researchers found that the Sentence Verification Technique (SVT) is an appropriate test for measuring “meaning memorization". The use of the SVT test as a measure of reading comprehension is shaped by the theoretical assumption that comprehension is a “constructive” process that results in a memory representation which preserves the meaning but not the form of the text. This assumption asserts that the process of comprehension entails an interaction between context, the linguistic text, and the prior knowledge of the reader. Hence, comprehension can be measured by determining if readers successfully establish a meaning-preserving memory representation of something they read (Marchant, Royer, & Greene, 1988: 828).

The SVT test entails developing one of four types of test sentences from each sentence appearing in a text: “an original”, which is a copy of the sentence as it originally appeared; “a paraphrase”, which is constructed by changing as many words as possible without altering the meaning of the sentence: “a meaning change”, produced by changing one or two words in the sentence so that the meaning of the sentence is altered and, “a distractor”, a sentence that has the same general structure of the text, but did not appear in the text (Royer, Marchant, Sinatra & Lovejoy 1990: 162). An SVT test is constructed by selecting one of the test-sentence types to represent each sentence in an original text. The test is administered by having a subject read the original text and then mark each of the test sentences as old or new without re-examining the text (Royer, Abnanovic & Sinatra 1987: 21). If readers have remembered the meaning of a text, then they should be able to judge that original and paraphrased sentences have the same meaning, and they should be able to reject meaning change and distractor test sentences (Royer, Green & Sinatra 1987: 417). Royer, Abnanovic & Sinatra (1987: 21) present considerable research evidence regarding the reliability and validity of the SVT test.

On the other hand, the present researchers chose “summarization” to measure “meaning generation”. The assumption underlying summarization is that readers, when comprehending a text, form a gist which represents their overall comprehension of the text. Summarization entails recognizing the main ideas as well as ideas in a text. The set of ideas in a text represents, as has been mentioned above, all of the meaning expressed in that text. There is evidence that while most readers may remember a similar number of main ideas (macropropositions), readers may differ in the number of ideas (micropropositions) that they remember. There is considerable research evidence regarding the validity and reliability of summaries as a measure of reading comprehension (Head, Readence, & Buss 1989; Taylor 1984).

It is noteworthy that the present study, to the best of the researchers’ knowledge, is the first attempt to employ Kirby’s theory of reading and SVT test with EFL students. Moreover, no study, to the best of the researchers’ knowledge, has been conducted with regard to EFL/ESL reading styles.

However, there are at least two studies of effective reading strategies. The first used self-reports with ESL students (Hosenfeld 1977). Hosenfeld noted that successful ESL readers kept the meaning of a passage in mind while reading and used the accumulated information to predict further meaning. The second study (Chamot, Kupper & Impink-Hernandez 1988) used think-aloud interviews with FL students studying Russian and Spanish. In both language groups, students at the beginning levels of language study relied most on repetition, translation, and transfer, whereas advanced students relied most on inferencing, though without abandoning familiar strategies such as repetition and translation.
The present study addresses the following questions:

1. What are the types of reading styles used by SQU EFL students while reading texts?
2. What are the students' levels of reading comprehension performance in relation to meaning memorization and meaning generation?
3. Do different reading styles have different effects on meaning memorization and meaning generation?

METHOD

Subjects

Forty eight English major senior students in SQU participated in the study. These students were taught by native speakers of English throughout their four-year programme.

Testing materials

Two texts were used in the study. They were selected from the extracurricular reading materials assigned for EFL students by faculty. These materials were judged by faculty to be appropriate for students in terms of vocabulary, topical content and linguistic complexity. The topic of the first text (T1) was "bureaucracy". It was selected from "Wordpower" by De Bono (1977). The topic of the second text (T2) was "creativity". It was selected from "Bridging the Gap: College Reading" by Smith (1985) and was originally extracted from "Psychology and You" by Dempsey & Zimbardo (1978). Three tasks were designed to be used with each text. Task One, which required students to write a summary of the text, included this question: "Imagine you are going to describe in writing what the text is about to someone who had not read it. What would you say?" Task Two included this question: "Describe, in writing, the strategies you used in studying the text." The purpose was to analyse students' responses so as to categorize their reading styles. Task Three consisted of the SVT test so as to measure meaning memorization. It was composed of 12 sentences.

Validity of the SVT test

Although, as mentioned above, the texts were selected from reading materials judged by faculty to be appropriate for the students, the texts and the sentences (12 for each text) were presented to a panel of six staff members. First, they were asked to judge the suitability of the texts for students in terms of vocabulary, content and linguistic level. Second, they were required to judge the classification of the 12 sentences in terms of being an original, a paraphrase, a meaning change, or a distracter. Interrater agreement was 100% for both texts.

Reliability

T1 and T2 tests were re-administered to 12 and 11 students, respectively, of the same group three weeks after the first administration. Reliability coefficient was .90 for T1 and .89 for T2, using the test-retest method.

Testing procedures

Students were then randomly divided into two groups. Each researcher administered the two texts to one group on two consecutive days. All tasks for each text were completed in one session. First, students were given the text. They were asked to read and study the text and then hand it back to the researcher. Then, they were required to do each task separately. As for task 3, i.e. the SVT test, students were required to write before each sentence whether it was New (N) or Old (O).

Analysis and scoring procedures

The two researchers independently scored the summaries (task 1) against a model summary for each text. The model summary for T1 (bureaucracy) included 4 main ideas (macropropositions) and 6 ideas (micropropositions). The model summary for T2 included 5 main ideas and 7 ideas. Two points were given to each main idea and one point to each idea. Thus, the maximum score was 14 and 17 for T1 and T2 respectively. The two model summaries were presented to the same panel for validation. As for T1, interrater agreement was 100% for all 4 main ideas, 100% for 5 ideas, and 83% for one idea. With regard to T2, interrater agreement was 100% for 4 main ideas, 83% for one main idea, and 100% for all 7 ideas. Meaning generation was determined by the sum of scores in summaries of both T1 and T2. Maximum score was 31.

In the case of task 2, the two researchers independently analysed the students' reports for T1 and T2 so as to categorize the students' strategies in terms of the three reading styles (analytic, global and synthetic) in accordance with the characteristic strategies of each style as described by Kirby. For example, a statement such as "I skipped the words which I did not understand" indicates a global style strategy. A statement such as "I used context to determine the meaning of unknown words" indicates an analytic style strategy. A statement such as "I focused on main ideas while reading the text" indicates a global style strategy. A statement such as "I look for the details" indicates an analytic style strategy. A statement such as "I make use of my (prior) knowledge of the topic" indicates a global style strategy. A style is determined to exist when a student uses the same class of strategies in reading both T1 and T2. It should be noted that the students wrote these self-reports in their mother tongue (Arabic) in order to make sure that the foreign language (English) was not a barrier to free expression of their thought.

In task 3 (SVT tests), each correct sentence was given one point. The sum of scores on both tests represents meaning memorization. Maximum score was 24.
RESULTS AND DISCUSSION

With regard to Question 1, i.e., types of reading styles used by SQU EFL students while reading texts, results revealed that only two types of reading styles were used by SQU EFL students. Twenty-two students (i.e., 45.8%) used, in reading both T1 and T2, strategies characteristic of the analytic reading style. In contrast, twenty-three students (i.e., 47.9%) used strategies characteristic of the global reading style. Three students (i.e., 6.3%) used inconsistent strategies in both texts. This indicated that they had no definite reading style. These results clearly show that the global and analytic reading styles are the prevalent styles among these students. The proportion of students using either style is almost equal. This may be attributed to several factors which may act either independently or inter-dependently. The most direct factor may be the influence of inappropriate teaching practices (e.g. methods of teaching, textbooks, testing system). Another factor may be the influence of inappropriate reading strategies and styles acquired in the first language. A third factor may be the influence of certain dominant cultural learning styles. For instance, some cultures have been said to possess relative strengths in the areas of visual or spatial information processing which may encourage the global style. Other cultures possess relative strengths in the area of phonological information processing (Reid, 1987).

As for Question 2, in order to identify the students' levels in meaning memorization measured by SVT in T1 and T2 as well as their levels in meaning generation measured by summaries of T1 and T2, means, standard deviations, medians, minimum and maximum scores were calculated (Table 1). Knowing that the maximum score for meaning memorization is 24, the results indicate that the students' level in meaning memorization is modest since the mean is 12.07 and the median is 12. This is almost equal to 50% of the maximum score. On the other hand, the results indicate that the students' level in meaning generation is low since the mean is 8.53, i.e. 27.5% of the maximum score (31), and the median is 8 which represents 25.8% of the maximum score. The low level of the students' reading comprehension performance is reflected in their minimum and maximum scores (2 and 20 respectively).

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<tr>
<th>Meaning</th>
<th>Mean</th>
<th>SD</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
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<td>4.04</td>
<td>12</td>
<td>6</td>
<td>21</td>
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<tr>
<td>Generation</td>
<td>8.53</td>
<td>4.58</td>
<td>8</td>
<td>2</td>
<td>20</td>
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Table 1: Students' levels of reading comprehension performance on meaning memorization and meaning generation.

These results show that the reading comprehension performance of these English major students, despite being in their final year of study, is strikingly low at both levels of meaning memorization and meaning generation, though the former is relatively higher than the latter. The low performance at the meaning memorization level indicates, according to Kirby's reading theory, that these students have not mastered the skills and strategies specific to the preceding (4th) level, i.e. word identification. It is not enough for readers to be able to identify words, they must be able to identify them smoothly or automatically if deeper processing is to occur. With regard to meaning generation, the strategies of these students, in accordance with Kirby's theory, may be characterized as erring in one of two directions. The first erroneous strategy is to process the text at too global a level. Thus while the meaning of superpositions is presumably processed in passing, few of these are retained for deeper processing and relatively few macropropositions are either constructed or retained. Students reading in this manner can indicate roughly the topic of the text. In other words, these global style students pay insufficient attention to the details of text, fail to attend to the appropriate level of meaning, and jump too quickly to the most global level of meaning. In contrast, the second erroneous strategy goes too far in the opposite direction. Students memorize as much as possible of what they read. They attend to the surface level of text, i.e. the microproposition level, and fail to attain deeper levels of interpretation. In other words, these analytic style students also pay too much attention to the wrong level of meaning in text, and attempt to remember the details or micropropositions of the text via the only means possible, i.e. rote memory. In contrast Kirby indicates that meaning generation requires a synthetic style which is not present in the sample in the present study. This may account for the low performance of students at the meaning generation level.

In general, these results may support Kirby's view that neither the global and analytic style is an adequate method of reading. It is noteworthy to stress here that what Kirby says is that either the global or the analytic style is ineffective if either style is "solely" employed by an individual. Both styles are partial components of the synthetic style.

With respect to Question 3, i.e., the effect of reading styles on reading comprehension performance represented by meaning memorization and meaning generation, the analysis of data was restricted to students who showed definite styles (i.e., 22 adopting an analytic reading style and 23 adopting a global style). The three students with no definite reading style were excluded from this analysis. Table 2 shows the results of a t test. The results indicate that no significant difference was found, in meaning memorization, between students adopting the analytic reading style and those adopting the global reading style. On the other hand, a slightly significant difference (p >.05) was found in meaning generation in favour of students adopting
the global reading style. These results partially support Kirby’s view that the global and analytic styles “would certainly not be equivalent in any more precise measure of reading competency” (p.267). They were equivalent in meaning memorization and non-equivalent in meaning generation.

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<th>Meaning memorization</th>
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<td>n</td>
<td>Mean</td>
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<tr>
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<td>11.27</td>
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<tr>
<td>Global</td>
<td>23</td>
<td>12.83</td>
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Table 2: Differences between students in meaning memorization and meaning generation according to their reading styles.

On the other hand, there is research evidence that the deep style, which corresponds to Kirby’s synthetic style, has a significant positive effect on L1 reading comprehension (Entwistle 1988, Marton 1988, Khouzam & Raslan 1992). Kirby points out (p.266) that the global style may be a primitive form of the deep style. This may explain the slight difference between the global style students and the analytic style students with reference to meaning generation. From the pedagogic point of view, in order for attempts to overcome reading problems to be successful, it is essential to diagnose the errors that readers make. It is important to recognize what strategy is being used to produce the errors observed. Strategies may relate either to the eight levels of information processing in reading or may relate to the three reading styles (i.e. global, analytic, and synthetic).

It is not easy to change students’ reading strategies and styles. Thus, it is vital to get students to recognize that they are employing inappropriate strategies and to design tasks in which they consciously use strategies comparable to the appropriate ones (Marton 1988). This metacognitive knowledge, that is, awareness of the task objectives, may facilitate transfer of the strategies to new tasks and may help students develop the autonomous use of strategies. It is important to stress here that skills and strategies should be taught together and not independently. As has been mentioned above, the strategic approach to reading problems recognizes the importance of skills.

Although there is ample research which supports the usefulness of training of strategies in L1, research on strategy training with SL and FL students is in its infancy, as most studies to date have concentrated on identifying and describing strategies students have either developed on their own or in classes conducted in their first language (O’Mally & Chamot 1990: 185-6).

We are, of course, aware of the problems related to strategy training such as the amount of EFL teacher training required to implement such innovations successfully, and the need for materials and curriculum development to integrate such innovations.

REFERENCES


INTRODUCTION

The University of Warwick's Pre-Sessional programme (held in August and September) is designed to help students who intend to pursue university studies in various disciplines. Students usually take the programme in September, when students join the course to improve their English and put study skills into practice in a British context.

At this final stage, any lack of communicative skills practice leaves some students, however, still unable to make the connection between the skills taught and their real study needs in their respective disciplines. To address this, the approach for reading tutors and programme developers lies in identifying appropriate texts of interest to students with different disciplinary interests and degrees of experience in their field, and in providing a framework that acknowledges students of varying reading competences. This paper suggests a way in which the dilemma can be resolved.

The approach, detailed later here, is based essentially on four assumptions:

1. Each student studies a text of substantial length, mostly of a work pertaining to own area of specialization.

2. Each reading practice activity improves the actual academic competences of students for any required success.