GENDER DIFFERENCES IN USING READING STRATEGIES

Wu Weiyin
Sun Yat-sen University

Abstract

This article attempts to find out if there are gender differences in using reading strategies and if any what they are. The questionnaire and think aloud research methods were adopted. Result shows that although the difference between boys and girls in the overall use of reading comprehension strategies was not significant, a strong tendency was observed indicating the greater extent of strategy use among girls in both the results from the questionnaire and think aloud technique. Girls used reading strategies more frequently than boys. Boys and girls used strategies differently, especially in the strategies for establishing coherence in the text.

Key words
reading strategies gender difference think aloud reading comprehension

1. Classification of reading strategies

It is not known how many strategies the readers use in the reading process. Sarig in 1985 summarized approximately 130 different strategies in reading when he studied the learners who read Hebrew as a native language and English as a foreign language. Later on the 1987 classified reading strategies into four types of strategies: technical moves, clarification and simplification moves, coherence detecting moves and monitoring moves.

Cohen 1990 revised these four types as the following: support strategies, paraphrase strategies, strategies for establishing coherence in text, and strategies for supervising strategy use. Support strategies are the reading acts that the reader undertakes to facilitate high-level strategies such as skimming, scanning, marking the text, and using a glossary. Paraphrase strategies refer to those strategies that are used to clarify meaning by simplifying syntax, finding synonyms for words and phrases, looking for propositions or basic ideas and identifying the function of portions of the text. Strategies for establishing coherence in text according to Cohen are the strategies that utilize the readers' world knowledge or clues in the text to make the text intelligible as a piece of connected discourse. Looking for organization, using context, and distinguishing the discourse functions in the text are examples of strategies for establishing coherence in text. The fourth group is strategies for supervising strategy use. Conscious strategies like planning, self-evaluation, identifying misunderstandings, and remediation that the readers employed for checking on the reading process as it takes place are called supervising strategies.

Anderson 1991 agrees with Cohen's classification, but adds test-taking strategies as the fifth group of reading strategies. In his research, he studied the strategy use of twenty-eight Spanish-speaking students who were learning English and identified forty-seven strategies altogether. His classification includes eleven supervising strategies, five support strategies, six paraphrase strategies, seven strategies for establishing coherence in text, and eighteen test-taking strategies. The main reason why he includes test-taking strategies is that test is often the method of operationalizing the construct of reading.

2. Gender difference in using reading strategies

It is assumed that males and females use learning strategies differently in reading. Some studies have been conducted to investigate this issue. Results seem to confirm the assumption that differences exist between males and females. But the results of the studies varied. Bacon 1992 found that males used more translation strategies than females. Zobirshaw 1995, Oxford 1995, suggested that there was a significant difference between males and females in using guessing and contextualization. In China, Yang 1999 also found that females had more strategy awareness. Mix 2003 claimed that females were more active in strategy using and used reading strategies more frequently.

As studies on gender differences in reading strategies in China are far from enough, this study attempts to investigate the differences between boys and girls in using reading strategies and hopes to give some practical suggestions for teaching practice.

3. The experiment

3.1 Subjects

Eighty-six first-year students from Sun Yat-sen University participated in the study. All the subjects were from different parts of the country and passed the national college entrance examination. Ranging in age from eighteen to twenty, forty-three of them were arts students from the Chinese Department. Forty-three were science students from the Physics Department.

3.2 Materials

Reading Strategies Questionnaire. To assess the extent to which students used the strategies, a questionnaire comprised of five choices was developed. It was based on the reading strategies summarized by Hosenfeld 1977, Carrell & 1989, and Anderson 1991 combined with the observation and experience of the investigator. The questionnaire was composed of four categories: I. supervising strategies pertaining to subject and metacognition in reading, English, II. support strategies consisting of four statements, III. paraphrasing strategies, and IV. strategies for establishing coherence in text. This categorization was adapted from Sarig 1987, Cohen 1990, and Anderson 1991. The questionnaire examined the language learners' use of these strategies by asking them to indicate the extent to which they engaged in reading. The subjects responded to each on a five-point scale indicating "always", "sometimes", "neutral", "rarely", and "never".

Criterion Measures of Achievement. The students' language proficiency was measured by the placement test issued by the national College English Committee. In the reading task, students were asked to read four passages and then answer twenty comprehension questions. Their performance in reading was used to measure their reading ability.

Materials for the think-aloud procedure. Three passages chosen for the subjects were taken from Core English Book I, which was published by Shanghai Educational Publishing House. The three passages were Communication, Newspapers and Facts, containing two newspaper articles, and Intelligent Beings, varying in length from 229 to 295 words each followed by five multiple-choice comprehension questions for a total of fifteen questions. The passages were written in different styles about different subjects. Information available from the publisher indicates that the reading passages are authentic materials of standard English.

3.3 Procedures

The subjects had a placement test in the second week after they entered the university in September.
After they finished military training, they began their study from the first week in October. Questionnaires were distributed to them in the second week of October, a time when the students were used to their study in the university. The subjects responded to the questionnaires about reading in English. After that, the subjects were not given any instruction on reading strategies.

Then in the fourth week, forty subjects were chosen randomly to participate in the think aloud activities because a large population would be too difficult for the think aloud technique. As some of the subjects were absent for different reasons, in the end, twelve students from the Chinese department and eighteen students from the Physics Department actually took part in the think aloud procedure.

Before the participants began this phase of data collection, they were introduced to think aloud protocol procedures and provided an opportunity to practice prior to the reading activity. Then the participants were asked to read one passage and answer the comprehension questions. After reading each passage, the participants reported the strategies used while reading the passages. Each passage took five minutes and there was no limit for the reporting. The participants’ responses were audio recorded for analysis. Participants were allowed to produce think aloud protocols in either Mandarin or Cantonese. The data collected were transcribed for further analysis and discussion. Students from the two departments participated in the activity respectively in two days.

The purpose of the think aloud procedure was to delve into the mental activities of the subjects while they were engaged in reading and form an authentic picture of what was going on in the readers’ minds. Moreover, since the questionnaire focused on the extent to which the readers used reading strategies, think aloud protocols helped to find out the number and the kind of strategies they employed and how they used them. The data collected from the think aloud technique supplemented the results from the questionnaires.

Results of the experimental study

Forty-one girls and forty-two boys participated in the experiment. In language learning, there is a widespread prejudice that girls often do better than boys. In the experiment, a t-test was performed to see whether boys differed from girls in their language proficiency and reading ability. Results indicate that there is not a significant difference between them.

Because of the individualistic nature of strategies, an independent t-test was performed to explore the difference between boys and girls in their use of reading strategies.

Although the difference between boys and girls was not significant in the total use of strategies, shown in Table 1, results show that there is a strong tendency indicating that girls used reading strategies more frequently than boys. Girls scored higher in 24 strategies while boys only scored higher than girls in 7 strategies. What is more, girls also scored higher in all the subcategories of strategies, as shown in Table 2.

Table 1: t-test showing the difference between boys and girls in the use of strategies total.

<table>
<thead>
<tr>
<th>Strategy Use</th>
<th>t</th>
<th>df</th>
<th>Sig</th>
<th>2ailed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>462</td>
<td>81</td>
<td></td>
<td>147</td>
</tr>
</tbody>
</table>

Table 2: t-test showing the difference between boys and girls in the use of strategies group statistics

<table>
<thead>
<tr>
<th>Reading Strategies</th>
<th>N</th>
<th>Mean</th>
<th>Std Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subcategory I</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>000</td>
<td>42</td>
<td>8810</td>
</tr>
<tr>
<td></td>
<td>000</td>
<td>41</td>
<td>2045</td>
</tr>
<tr>
<td>Subcategory II</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>000</td>
<td>42</td>
<td>1667</td>
</tr>
<tr>
<td></td>
<td>000</td>
<td>41</td>
<td>4318</td>
</tr>
<tr>
<td>Reading Strategies</td>
<td>N</td>
<td>Mean</td>
<td>Std Deviation</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----</td>
<td>------</td>
<td>--------------</td>
</tr>
<tr>
<td>Subcategory III</td>
<td>42</td>
<td>1.0467</td>
<td>1.747</td>
</tr>
<tr>
<td></td>
<td>41</td>
<td>1.7273</td>
<td>0.727</td>
</tr>
<tr>
<td>Subcategory IV</td>
<td>42</td>
<td>2.1667</td>
<td>2.827</td>
</tr>
<tr>
<td></td>
<td>41</td>
<td>3.7045</td>
<td>2.348</td>
</tr>
</tbody>
</table>

Therefore, the difference between the use of individual reading strategies and reading ability was analyzed. Significant difference was found in the following strategies: Strategy 4, 12, 13, 14, 19, 24, 27, and Subcategory IV shown in Table 3.

Table 3: Test showing the significant difference between boys and girls in strategy use.

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>df</th>
<th>Sig</th>
<th>2-tailed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy 4</td>
<td>0.047</td>
<td>81</td>
<td>0.944</td>
<td></td>
</tr>
<tr>
<td>Strategy 12</td>
<td>2.44</td>
<td>81</td>
<td>0.027</td>
<td></td>
</tr>
<tr>
<td>Strategy 13</td>
<td>0.95</td>
<td>81</td>
<td>0.39</td>
<td></td>
</tr>
<tr>
<td>Strategy 14</td>
<td>2.45</td>
<td>81</td>
<td>0.041</td>
<td></td>
</tr>
<tr>
<td>Strategy 19</td>
<td>1.15</td>
<td>81</td>
<td>0.37</td>
<td></td>
</tr>
<tr>
<td>Strategy 24</td>
<td>3.14</td>
<td>81</td>
<td>0.023</td>
<td></td>
</tr>
<tr>
<td>Strategy 27</td>
<td>8.61</td>
<td>81</td>
<td>0.005</td>
<td></td>
</tr>
<tr>
<td>Subcategory IV</td>
<td>1.51</td>
<td>81</td>
<td>0.35</td>
<td></td>
</tr>
</tbody>
</table>

Results indicate that girls tended to have a clearer idea whether they understood a certain part of the text or not. And compared with boys, they more frequently skipped unknown words and skimmed the passage for a general idea. It is rather surprising to find that boys instead of girls had a tendency to translate the words or sentences into Chinese in their reading. This result is in concord with Bacon’s result. Girls also were more likely to reread the text. What distinguished boys from the girls in the four subcategories was subcategory IV. Strategies for Establishing Coherence in the Text. It seems that girls in the reading process used more top-down strategies which included the use of background knowledge and contextual clues.

Boys only scored higher in Strategy 12 and 19 among the above strategies. It means that boys comparatively speaking were more able to monitor their affective response to uninteresting texts than girls. But as the results indicate that both boys and girls scored very low in this strategy, it is six of one and half a dozen of the other. The significant difference in Strategy 19 indicates that girls were apt to analyze the syntactical structures more often than boys. They paid more attention to the grammar.

3.5 Results from the think aloud method

Girls reported more strategies than boys did. This seems to support the statistical results from the descriptive statistics. They not only surmounted boys in the extent of strategy use but also in strategy number. Boys reported very limited strategies.

Many girls were aware of the strategies and applied them on purpose, though sometimes they failed to apply them appropriately.

Tian: When I read, I often choose to read silently. This is a better way to read than to sound it out mentally.

Huang: If there are many new words, I read it out word by word in a low voice so as to concentrate on the text.
Zhou [It is obvious a typical article used to develop our ability to discriminate names from places I received this training in middle school] I can remember that
Zhu [I know I have to read the title first but when I read I forget and begin to read immediately]
The strategies in reading reported by boys are very limited Furthermore it can be seen that many of the strategies were employed unconsciously

Wang [I don't understand some words But I don't guess the meaning I understand the passage after a while]
Li [It "don't understand Next For Yes it means]
Su [I read the title first and then I read the passage]

In the following [the differences in the use of individual strategies in the four groups of strategies were analyzed]

1 In group one [strategy 4 and 12 differentiated boys from girls] Girls were able to evaluate their success in understanding They knew which portions of the text they understood or did not understand and adjusted their strategies When they read something easy they tended to read fast when they read something difficult they resorted to different strategies like monitoring their attention rereading and sounding out the words or sentences

Tian [When I read the first sentence I found two words I didn't understand I immediately concentrated my attention]
Chen [At the beginning I found many new words I underlined these words]
Chen [I didn't quite understand the second paragraph so I read it again]
Fan [The whole article was not difficult I could understand 70 to 80 percent of it]

Boys [on the other hand] expressed overconfidence in evaluating their success One of the reasons is that they put too much attention on vocabulary If they did not see many new words they took it for granted that the passage was easy and neglected the strategies that might be useful to them

Liu [There were not many new words in this passage so I read very quickly]
Liu [Like the first sentence I can guess the meaning without looking at it]
Wang [Not many new words Very simple No difficulty No guessing needed]

However girls tended to respond more negatively to tedious passages than boys They showed great interest in fascinating articles but read very slowly when they met boring passages They expressed a love for stories and newspaper articles but were afraid of difficult expository texts

Wang [I can concentrate better because this article is much more interesting than the last one and interesting articles are easier to understand]
Zhu [I lose confidence when the passage has a lot of new words and becomes uninteresting]

2 Statistical results show that boys and girls differed in the use of strategy 13 [14 and 19 in the second group of strategies] Girls skipped unknown words and read in broad phrases In addition they tended to analyze the grammatical structures of the sentences From the think aloud data boys also reported a use of strategy 13 — skipping unknown words It seems that both boys and girls were aware of this strategy and applied it in the reading process The only difference is the extent to which it was employed

As to strategy 14 girls tended to read in broad phrases They also read word by word but only when they were reading some difficult words or sentences So that to them reading word by word is an effective strategy because it's sounding out the words Therefore it is hard to say which strategy is ineffective Some seemingly difficult strategies become helpful when they are properly employed But to the boys they read word by word just because they were not able to read in broad phrases

Zhou [girl I read phrase by phrase or sentence by sentence so that I can read faster]
Zheng [boy I read word by word I don't want to do this but I am unable to read several words at a time I read too slowly]
In terms of grammar, boys were more likely to focus on vocabulary and girls on sentence structures. From the think aloud data it can be observed that boys evaluated the difficulty of the text by counting the new words. In contrast, girls were more likely to judge the difficulty by both the new words and the sentence structures. That’s why girls were apt to analyze the sentence structures.

Strategy 24 in group three also differentiated boys from girls according to the statistical results. Boys tended to translate the sentences into Chinese to facilitate comprehension. One special example is found in the think aloud data. A boy in the Physics Department translated every sentence into Chinese. He read out an English sentence and then translated it into Chinese and then read another English sentence and translated it again. Another boy in the Chinese Department translated every comprehension question into Chinese before he made the choice.

On the other hand, girls used the strategy of translation only when they reconsidered the text or when they met difficulty.

Chen: I skim the text and think about the meaning in Chinese to comprehend the meaning of the text.

Huang: This sentence is difficult. I got news as” I translated it into Chinese” well it means...

The only strategy in group four that differentiated boys from girls is strategy 27 — reading the text again. This strategy is closely related to strategy 4 — evaluating success in understanding. Girls reported to reread the text for different reasons.

Tian: When I finish the comprehension questions, I read the passage again more carefully this time and word by word.

Chen: I read the passage again because the last question was difficult to answer.

Wang: When I read again, I found that it was the name of a place. I didn’t notice it in the first reading.

Zhu: This passage was very difficult. I didn’t know what the third part was about. I reread it twice.

But for the boys again, they reported confidence and thought in unnecessary to read again. Even when they were not sure of the understanding, they didn’t want to make the effort to read the text again.

Liu: I usually read once and read carefully. I don’t have to read again.

Wang: I am not sure of the answer. Maybe I should reread over again but there is no time. Well, let it be.

Zheng: There are some new words, so I read slowly. If I can’t guess the meaning, I skip. Usually I don’t read again.

Discussion and conclusion

Although the difference between boys and girls in the overall use of reading comprehension strategies was not significant, a strong tendency was observed indicating the greater extent of strategy use among girls in either the results from the questionnaire or think aloud technique. The boys reported strategies were very limited in the think aloud technique. This may explain in part why some of the girls often have better achievement in English learning. One of the possible reasons for it is that girls pay more attention to the use of strategies. This is only an assumption. Further research may be followed to look into the progress they make in the following years.

Boys and girls used strategies differently, especially in the strategies for establishing coherence in the text. It seems that girls were more likely to use top down strategies than boys. But it should be noted that the top down strategies the girls tended to use were often text based like using signal words and contextual clues to help their comprehension. When it comes to the use of background knowledge or schema, no significant difference was found. Boys even used them a bit more frequently than girls.

Girls were more careful readers and careful learners. They seemed to use the strategies in a more ritualistic way. The strategies they reported using were mostly strategies perceived as effective strategies. In think in English, do not translate, read for gist, etc. They seem to pay more attention to the use of
strategies. Girls reported to have learned the strategies in middle school and in the reference books, while boys tended to ignore the decryption of strategies in the textbooks or reference books. When a girl reported in the class in detail some of the strategies they were taught in middle school, some boys were astonished with admiration—they did not remember such things. Girls seemed to remember what strategies were taught in school and were able to apply them in the specific learning tasks. The awareness of strategies as mentioned in Cohen [1990] is lacking among the boy students.

Significant differences in Strategy 19 and 24 imply that the girls were more readily receptive to the new language. They were apt to think in English. While boys on the other hand tended to think in their native language. Therefore, when they met problems in reading, boys were more likely to translate the words or sentences into Chinese to help them understand. In the think-aloud reports, one boy translated every sentence into Chinese after reading every sentence aloud. In contrast, girls would prefer to analyze the grammatical structures to help them.

References

Appendix

The Questionnaire

When I read I would
1. Read with questions in my mind I would formulate some questions before reading
2. Predict the content of the text
3. Read immediately without second thought
4. Recognize the failure to success to understand a portion of the text
5. Confirm or disconfirm an inference
6. Question the significance and truthfulness of the text
7. Concentrate
8. Recognize the difference between main points and details
9. Adjust reading rate to increase comprehension
10. Refer to lexical items that impede comprehension
11. Be at a loss at difficult text
12. Respond negatively to uninteresting articles
13. Skip unknown words
14. Skim the whole text for the main idea
15. Visualize
16. Read a phrase or a sentence at a time
17. Want to use the dictionary
18. Mentally sound each sentence
19. Analyze the syntactical structure of the sentences
Pay attention to every detail:

Read word by word:

Scan for useful words or phrases:

Use word formation rules to comprehend a new word:

Translate the words or sentences into Chinese:

Use paraphrasing to help comprehension:

Extrapolate from information presented in the text:

Reread the text:

Use contextual rules to interpret a word or phrase:

Respond to the genre and organization of the text:

Read ahead for further clues:

Use background knowledge to help comprehension:

Give up reading when it is too difficult:

Analyze the grammatical structure to help comprehension:

Use signal words to help comprehension:

[Continued from p. 55]


[Continued from p. 61]


[Continued from p. 55]