

三位不同程度二專生的英語閱讀理解能力和後設認知

Reading Comprehension Ability and Metacognitive Awareness of Different Proficient Junior College Readers

許雅竹¹ 劉怡嫻¹ 吳文君²

Ya-Chu Hsu¹, I-Na Liu¹, Wen-Chu Wu²

¹Department of Aviation & Communication Electronics, Air Force Institute of Technology

²Department of Aero-Electronic Engineering, Air Force Institute of Technology

¹空軍航空技術學院航空通訊電子系

²空軍航空技術學院航空電子工程科

摘要

本研究的目的是探討三位英語閱讀程度不同的二專生在閱讀理解能力、後設認知和策略運用的差異和相互關係。研究者收集這三名學生的後設認知問卷、有聲思考紀錄、文章讀後回想和閱讀理解測驗。三位學生皆認為閱讀文章時整體式閱讀策略是必須的。然而在實際閱讀過程中，只有程度較優的學生使用大量的整體式閱讀策略，程度中等的學生主要運用局部性的閱讀策略，而程度不好的學生在閱讀中使用最少的策略。程度不好的學生在文章讀後回想中只能寫出一或二個句子，卻在閱讀理解測驗中分數達到六十分以上。作者認為程度不好的學生除了加強訓練他們使用整體式閱讀策略之外，也要增進局部性的閱讀策略運用。

關鍵字：閱讀理解能力、後設認知、文章讀後回想、閱讀策略

Abstract

This study was intended to provide a detailed description of the metacognitive awareness used : by three junior college students at different proficiency levels. This description also explored the interrelationships among metacognitive awareness, reading comprehension and strategy use. Four types of data were collected and analyzed — metacognitive questionnaire responses, think-aloud protocols, written recall protocols and multiple-choice reading tests. The findings of this study revealed that although three readers recognized the importance of global strategies in reading, actually the readers who were medium and less proficiency failed to use global strategies efficiently in the process of reading and almost relied more on local strategies. The proficient reader used a large amount of global strategies in reading process while the medium proficient reader used much more local strategies to solve his problems and the less proficient reader used the fewest strategies. The results confirm that it seems necessary for less proficient readers to improve their ability to use different types of local strategies in reading process besides global strategies. The study concludes with some implications for reading instruction.

Key Words : metacognitive awareness, strategy use, think-aloud protocols

I. Introduction

The current study was undertaken to compare different proficient readers in their metacognitive awareness, reading comprehension and strategy use. In light of the need to further investigate reader's reading process, the study was conducted to provide insight into different proficient EFL readers' perception of reading and actual reading behavior. To achieve this goal, multiple-measures were used to check consistency among readers' metacognitive awareness, strategy use and reading comprehension. The findings of this study revealed that three readers regarded as either interactive strategizers who perceived the global strategies as effective as local strategies or global strategizers who perceived the global strategies more effective than local strategizers, recognized the importance of global strategies in reading. Actually the readers who were medium and less proficiency failed to use global strategies efficiently in the process of reading and almost relied more on local strategies. The proficient reader used a large amount of global strategies and few local strategies in reading process while the medium proficient reader used much more local strategies than global strategies to solve his problems and the less proficient reader used fewer strategies than the others. The results confirm that it seems necessary for less proficient readers to increase their ability to use different types of local strategies in reading process besides global strategies. In addition, it is not sufficient to just know about strategies for readers. They must be able to apply them strategically.

Literature Review

Many early studies have explored the relations between certain types of reading strategies and successful or unsuccessful foreign or second language reading. The study showed that because of their lower proficiency levels, the unskilled readers were more dependent on bottom-up decoding skills and tended to use local strategies. On the other hand, readers who were advanced proficiency levels employed global strategies or top-down decoding skills (Carrell, 1989).

In Devine's study (1984) on second language readers' conceptualizations about their reading in a second language, the readers were classified as sound-, word-, or meaning-oriented. The meaning-centered readers demonstrated better comprehension on a retelling task from an oral reading than the sound-centered readers. In fact, the first language reading research has revealed that younger and less proficient readers tend to focus on reading as a decoding process rather than as a meaning-getting process (Myers & Paris, 1978; Canney & Winograd, 1979; Garner & Kraus, 1981; Paris & Myers, 1981; Gamvrell & Heathington, 1981).

A good reader has the knowledge to use the strategies appropriately and effectively. This kind of knowledge is called metacognition or metacognitive awareness/perception of reading strategies (Baker & Brown, 1984; Flavell, 1979). Furthermore, to better understand the differences between good readers and poor readers, some researchers suggested to investigate the relationship among reading comprehension, strategy use, and metacognitive awareness or metacognition

of reading strategies (Barnett, 1988b; Block, 1992 ; Carrell, 1989, Carrell, Pharis, & Liberto, 1989; Devine, 1988; Whyte, 1993).

Research illustrated that the ability to comprehend and meta-cognitive control of study strategies were related to the recall of information at both ages (Peverly, Brobst & Morris, 2002). Specifically, students with well-developed meta-cognitive skills are able to compensate for the cognition, monitor their comprehension and evaluate the relationship between study activities and task goals than students with less meta-cognitive skills (DiVesta & Moreno, 1993). Barnett (1988) found that students who effectively consider and remember context understand more of what they read than those who employ this strategy less or less well.

In light of the need to explore the interrelationship among the metacognitive awareness, reading comprehension and strategy used by three readers at different proficiency levels, this current study used multiple measures and served a two-fold purpose. First, it aimed to compare proficient and less proficient EFL readers in their strategy use and metacognitive awareness in different contexts. Second, it served a diagnostic function and identified individuals' reading problems.

II. Research Method

Participants

In this study three second-year junior college students are at three different proficiency levels. For convenience of discussion, they will henceforth be referred to as Lee, Allen and Steve. Lee passing the GEPT test (General English Proficiency Test) got the license of high-

intermediate and Allen got the license of basic, while Steve was less proficiency level and didn't get any license.

Instruments

Four instruments were used in this study, including (1) metacognitive questionnaire (See Appendix A), (2) two reading texts, (3) think-aloud protocol and (4) reading comprehension assessments containing free written recall protocol and multiple-choice comprehension test

Metacognitive questionnaire To measure students' metacognitive awareness of their reading processes, the metacognitive questionnaire was an adapted form of Carrell (1989). The researcher employed the Cheng' adapted version (2003). Using a 1-5 Likert Scale (1 = strongly agree, 5 = strongly disagree), students were asked to judge thirty-three statements about silent reading strategies in English in question (See Appendix A). Items on the questionnaire including: (1) six statements (items 1-6) concerning subject's abilities in reading to provide a measure of their confidence as readers in English; (2) five statements (items 7-11) pertaining to what they do when they do not understand something, to provide a measure of their awareness of repair strategies; (3) sixteen statements (items 12-19 & 26-33) about what they focus on in order to read more effectively and about reading behaviors of the best readers they know, to tap their perception of effective/efficient strategies; and finally, (4) six statements (items 20-25) about things which may make English reading difficult for them, to measure their awareness of difficulty. In order not to have level of language proficiency in English affect results on the metacognitive

questionnaires, subjects received the questionnaire in Chinese.

Reading texts Two reading texts were used in the current study. Text A contained 557 words and was read in a think-aloud session. The article discussed the development of blog (Malarcher, 2004). It was rated at the seventh-grade readability level by the Fry's readability graph (Fry, 1977). Text B, a 583-word expository article, discussed the advantages of community college (Folse, Muchmore-Vokoun & Solomon, 1999). The reading level of Text B was at eighth grade. The two texts selected by three junior college teachers were considered appropriate for students.

The think-aloud protocol The research employed Block's strategy type (1986) to analyze three students' think-aloud protocol. Strategies were categorized into two levels: global comprehension and local linguistic strategies (See Appendix B). The students were trained and given on sample passages to read in order to practice thinking aloud. They were told to report exactly what they were thinking while reading and were cautioned against trying to explain or analyze their thoughts. They read "Blog" and were recorded into a digital MP3 player. Tapes of the think-aloud protocols were transcribed and coded, using the categories described above. For each coded transcript, frequency counts of each strategy category were calculated, as was the proportionate use of each mode.

Written recall protocols. After reading "community college", students were asked to write a recall protocol without looking back at the passage. They had to write in

sentence form and in participants' native language, Mandarin Chinese.

Multiple-choice test After reading and recalling the passage, students answered 6 multiple-choice questions. They were not permitted to look at the passage while answering these questions. The recalling was used to investigate the relationship between strategy use and the information remembered, while answers to the multiple-choice questions showed the amount of information understood by the student. In multiple-choice tests, students only had to recognize the word and select it without remember the words or phrases to produce a sentence. Therefore, this kind of test was able to assess a student's comprehension efficiently (Wolf, 1993).

III. Data Collection Procedures

First, three participants were asked to write a recall protocol after they had read "community college". Then they had a multiple-choice test about this article. Each participant at different time came to the researcher's office to practice thinking aloud. Before their training, they had to finish the metacognitive questionnaire. Finally, the researcher asked them to perform the think-aloud task.

IV. Results

The results of metacognitive questionnaire

In the questionnaire, Steve showed he can distinguish main points and supporting details, integrate information, use prior knowledge and monitor comprehension. He gave neutral answer to the item of anticipate context. All the three students did not question the significance or truthfulness of what the author says. In repair strategy, Steve gave the neutral opinion on item 11 "I give up and stop

reading if I don't understand something.” In contrast, Lee and Allen completely disagreed with it. From items 7 to 10, Steve considered they are important to keep on reading, reread, go back to a point before the problematic part and reread from there, or look up unknown words in a dictionary.” Steve tended to agree that word meaning, sentence syntax, text gist and text structure will make the reading difficult. However, Allen thought that sentence syntax and text structure are main factors to affect his reading while Lee regarded background knowledge more than others. The responses to the effective strategies showed they always focused on text gist, pronunciation of words and looking up words in dictionary when reading. Only Steve considered that understanding the meaning of each word is an effective strategy. To tap the three students' metacognitive perceptions about effective reading strategies, 16 items on the effective strategies were categorized into two subgroups of items. Of the sixteen items, the ten items relating to sound-letter, word-meaning, sentence syntax and text details were classified as “local” items; the remaining six, including background knowledge, text gist, and textual organization, were classified as “global”. The three students' responses to each subgroup of items were averaged. Based on their average responses to the Effective items in the questionnaire, Lee and Steve were classified as interactive strategizers who perceived the global strategies as effective as local strategies while Allen was considered as global strategizers who perceived the global strategies more effective than local

strategizers (Carrell, 1989). None of them were regarded as local strategizers who perceived the local strategies more effective than global strategies (See Appendix B).

Strategy use

Lee not only used his knowledge and experience to explain, extend and clarify content, but also predicted what would occur in the third paragraph. “Now that the first sentence doesn't mention the information about media and war again, I am sure that the author will talk about blog in succeeding portions.” He always assessed his understanding about text. Sometimes he employed the strategy of “corrective behavior” to give his interpretation. In addition, he connected the new information with preceding sentences and paragraphs. While reading the article, he might react to the information of the text. For example, “I have used my blog for three months and I love to express my feelings and ideas in my blog every day. Hundreds of people have entered my web site to read my diary.” Besides, he recognized text structure, made an inference or drew the conclusion. “After reading this article, I finally understand why phones with cameras are banned from our school.” Lee used a large amount of global strategies. In contrast, he used few local strategies. While he met unknown words, he employed word-solving strategy to deal with them. Occasionally, he made use of knowledge of grammar to solve words or sentences.

Allen used a different approach. He used lots of local strategies to solve his problems. Although he questioned the

meaning of sentences or words for many times, he could reread the sentences, skipped the unknown words and went on reading or used word-solving strategies in the process of reading. For example, he knew “tear” this word had two meanings. In the first time, when he read the phrase ‘tear up’, he considered someone was weeping. But when he continued reading, he was sure that “tear up” should mean “pull violently” He used several global strategies while reading. He recognized the text structure and sometimes gave the main ideas for paragraphs. Especially, he could utilize his previous knowledge and experience to explain content. For example, it was not difficult for him to understand the article since he owned his blog. In addition, he could correct his wrong interpretation quickly. While he read “surf the internet” in the fourth paragraph, he misunderstood the meaning of “surf”. But after he read the sentence again, he could grasp the meaning of the whole sentence right away.

Steve used fewer strategies than other students. He used three global strategies and one local strategy. Sometimes he could recognize the text structure. Occasionally, he could employ his previous experience and knowledge to clarify the passage and connected new information with previous content. Maybe the article was difficult for him to read. He had many unknown words and questioned the meanings of these words for twenty-eight times. He did not use word-solving strategy to understand an unknown word. Even though he knew every word in a sentence, he still could not grasp the whole meaning of the sentence. He was always confused and frustrated by

his failure to understand the sentences.

Written recall protocols

The text structure of the reading passage was analyzed by three instructors. The recalling was scored for the number of main ideas, minor ideas and detailed ideas. In order to be sure the scoring was consistent, two independent raters analyzed and graded the written protocols. They achieved an inter-rater reliability of .91. Disagreements in coding were later resolved through discussion.

Performance on written recall was revealed (See Appendix C). Lee focused on three main ideas and eight detailed ideas and did not state any the minor ideas. While Allen’s recalling included two main ideas, two minor ideas and five detailed ideas, Steve only wrote down one detailed idea. It seemed that Steve did not follow the organization of information in the passage.

Multiple-choice test

Although Lee did not state any minor ideas, he achieved the highest scores of 100, showing he could completely understand the passage (See Appendix C). However, Steve achieved scores of 68 even though he had performed poorly on his recalling only containing one detailed idea. It showed that he could understand and extract appropriate information.

V. Discussion

Although Steve was regarded as an interactive strategizer based on his responses to the Effective items (See Appendix D), actually he is a local strategizer who reached 90 percent of local strategies and only used three global strategies (10%) in reading. The total number of strategies used by Steve was

only four since there were seventeen strategies that could be employed. He seemed to have metacognitive strategic knowledge, but he did not use them. This supports the claim by Baker and Brown (1984) that “knowing that” is different from “knowing how”. The same observation applies to Allen. Despite he was considered as a global strategizer, he preferred local strategy (73%) to global strategy (27%). This result corroborated Baker and Brown’s (1984) earlier finding that readers often indicated they knew a strategy to be effective, but they did not use it while reading. In contrast, Lee, regarding as an interactive strategizer, used a large amount of global strategies (70%) more than the use of local strategies (30%) and totally employed fifteen strategies in reading. This result supported the study by Carrell (1989) in which he stated that the ESL students, of more advanced proficiency levels, tended to be more “global” or top-down in their reading strategies.

Based on the case study, we discovered the relationships among reading comprehension, strategy use and perceived strategy use. Students who effectively considered and remembered content could understand more of what they read than students who employed the strategy less. This result is consistent with Barnett’s (1988) finding.

VI. Implications and Conclusion

This study examined the differences among three different proficient EFL readers in terms of their metacognitive awareness, strategy use and reading comprehension ability. Combining the data collected by four different methods, a few

differences were presented. Although the research findings revealed that three students, who were considered as either interactive strategizers or global strategizers, recognized the importance of global strategies in reading, actually the students who were medium and less proficiency failed to use them efficiently in the process of reading and almost relied more on local strategies. Maybe their responses to the items of metacognitive questionnaire were based on what they were supposed to do to read effectively rather than on what they actually did in reading.

Although the differences above were only based on three students and was hardly able to be generalized to larger populations, some implications could be derived from this small-scale study as references for future reading instruction.

First, with developed strategies, Lee used them in the process of reading and made him succeed. This supported the claim by Anderson (1991) that readers who reported using a higher number of different strategies tended to score higher on the comprehension measures. In this case study, the medium proficient reader was aware that the global strategies were more effective than local strategies, but he only used four types of global strategies. Maybe he did not know how to employ other global strategies in reading. For a reader, undoubtedly, it is not sufficient to just know about strategies. He must also be able to apply them strategically. So teaching readers how to use strategies focusing on top-down process should be a prime consideration in reading classroom.

Second, since Allen and Steve

achieved high percent (36% and 90%) to question word or phrase, it is obvious that they should practice vocabulary building based on context and improve the ability of vocabulary strategies. In addition to learning global strategies, it seems necessary for less proficient readers to increase their ability to use different types of local strategies in reading process.

Third, thinking-aloud can be an important learning tool. By speaking aloud what one understands in reading, the proficient reader can share his reading process among peers. Besides, it gives teachers access to individual reading process so that teachers can give timely instruction to improve individual student's reading comprehension.

Finally, by research measures in different contexts, teachers can identify and diagnose reading obstacles of learners and tailor remedial reading instruction to meet individual learners' needs. Furthermore, it is necessary to have training studies on the most effective instructional ways for improving metacognitive awareness and teaching reading strategies. In sum, raising the readers' metacognitive awareness can help them become strategic readers and even bolster up their confidence in strategy use.

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Appendix A

Sample Metacognitive Questionnaire Used in This Study

說明: 這一部分的問卷是為了瞭解您如何閱讀英文, 以及您對英語閱讀過程的看法。請閱讀每一項

敘述, 然後根據該敘述符合您真實情況的程度來圈選答案。切勿依您認為「應該如何」或「別人會怎樣」來回答, 如前所述, 答案並無所謂的對錯之分。

答題方式: 1. 非常不同意 2. 不同意 3. 無意見 4. 同意 5. 非常同意

- ____1. 當我默讀英文讀物時, 我能夠預測文章接下來的內容是甚麼。
- ____2. 當我默讀英文讀物時, 我能夠分辨文章中的主要重點以及支持這些重點的細節。
- ____3. 當我默讀英文讀物時, 我能夠把文章中前後文所包含的資訊連接起來。
- ____4. 當我默讀英文讀物時, 我能夠對作者所說內容的重要性及真實性提出質疑。
- ____5. 當我默讀英文讀物時, 我能夠以我既有知識及經驗來瞭解文章的內容。
- ____6. 當我默讀英文讀物時, 我能夠清楚察覺甚麼時候我了解所讀的內容, 甚麼時候我不了解。

當我默讀英文讀物時, 如果遇到不了解的地方,

- ____7. 我會繼續讀下去, 希望讀到後面時會有說明。
- ____8. 我會重讀所不了解的地方。
- ____9. 我會回到所不了解的地方之前的一點, 然後再從那兒起重讀一遍。
- ____10. 我會用字典查不認識的字。
- ____11. 我會放棄而停止閱讀。

當我默讀英文讀物時, 為了能有效地理解所讀的內容, 我將我的注意力集中在

- ____12. 瞭解每一個字的意思。
- ____13. 瞭解文章的大意。
- ____14. 能唸出每一個字的音。
- ____15. 文法的結構。
- ____16. 把文章裡的內容與我對此主題既有的知識做連結。
- ____17. 用字典查單字。
- ____18. 文章內容裡的細節。
- ____19. 文章的組織結構。

當我默讀英文讀物時, 造成我閱讀上的困難的是

- ____20. 不能發出單字的音。
- ____21. 不能了解單字的意思。
- ____22. 不熟悉文法的構造。
- ____23. 不能將所讀的東西與我既有的知識做結合。
- ____24. 不能了解文章的大意。
- ____25. 不能看出文章的組織結構。

我所認識的英文閱讀能力最好的人, 他(她)之所以閱讀能力強是因為他(她)

- ____26. 能認得許多字。
- ____27. 能唸出單字的音。
- ____28. 能了解文章的大意。
- ____29. 擅於查字典。
- ____30. 擅於猜字的意思。
- ____31. 能將所讀的東西與他(她)既有的知識做結合。

___32. 集中注意力在文章內容的細節。

___33. 能看出文章的組織結構。

Appendix B

Think-Aloud Protocols

The Actual Strategy Use of Three Participants

Strategy type	Lee N (%)	Allen N (%)	Steve N (%)
Global Strategies			
Anticipation	1 (4)	0	0
Recognition of text structure	2 (7)	2 (6)	1 (3)
Integration	3 (11)	1 (3)	1 (3)
Questioning of text	0	0	0
Interpretation	2 (7)	0	0
Association	3 (11)	3 (9)	1 (3)
Commenting	1 (4)	0	0
Monitoring	3 (11)	0	0
Corrective behavior	1 (4)	3 (9)	0
Emotional reaction	3 (11)	0	0
Subtotal	19 (70)	9 (27)	3 (10)
Local strategies			
Paraphrasing	0	0	0
Rereading	1 (4)	2 (6)	0
Questioning of clause or sentence	1 (4)	3 (9)	0
Questioning of word or phrase	1 (4)	12 (36)	28 (90)
Word solving	2 (7)	3 (9)	0
Knowledge of grammar	2 (7)	2 (6)	0
Translate a clause or sentence into L1	1 (4)	2 (6)	0
Subtotal	8 (30)	24 (73)	28 (90)
Total	27 (100)	33 (100)	31 (100)

Appendix C

The Three students' Memory and Comprehension Scores

	Multiple-choice tests (% correct)	retellings		
Participant		Main idea	Minor idea	detailed idea
Lee	100	3	0	8
Allen	84	2	2	5
Steve	68	0	0	1

There were six questions in the test.

There were 5 main ideas, 8 minor ideas and 10 detailed ideas in the passage.

Appendix D

The Effective Strategies of Three Students' Metacognitive Perceptions

Participants	Metacognitive Perceptions
Lee	Interactive
Allen	Global
Steve	Interactive