

T

# Test-taking Strategies Used by Proficient and Less Proficient Thai EFL Learners in Doing a Multiple Choice Reading Test

## การศึกษากการเลือกใช้กลยุทธ์การทำแบบทดสอบของผู้อู้เรียนที่มีผลสัมฤทธิ์ทางการเรียนภาษาต่างกันในการสอบการอ่านเพื่อความเข้าใจแบบตัวเลือก

- **ดร. ศุภินี ชวนไชยสิทธิ์**
- รักษาการรองอธิการบดีฝ่ายการต่างประเทศ
- อาจารย์ประจำสาขาวิชาภาษาอังกฤษธุรกิจ
- คณะมนุษยศาสตร์และประยุกต์ศิลป์
- มหาวิทยาลัยหอการค้าไทย
- 
- **Dr. Suttinee Chuanchaisit**
- Acting Vice President of Foreign Affairs Division
- Lecturer, Department of Business English
- School of Humanities and Applied Arts
- University of the Thai Chamber of Commerce
- E-mail: drsuttinee@gmail.com

### บทคัดย่อ

แม้ว่าความสำคัญของการใช้กลยุทธ์ในการทำแบบทดสอบและประเด็นเรื่องระดับของสมรรถนะทางภาษากำลังเป็นประเด็นที่น่าสนใจในงานวิจัยเกี่ยวกับการทดสอบทางภาษา หากแต่ ณ ปัจจุบันมีงานวิจัยจำนวนไม่มากนักที่ศึกษาค้นคว้าเกี่ยวกับการใช้กลยุทธ์ในการทำแบบทดสอบด้านการอ่าน โดยเฉพาะในบริบทของผู้เรียนชาวไทยที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศ ด้วยเหตุนี้ งานวิจัยฉบับนี้

จึงมุ่งค้นคว้าเกี่ยวกับการใช้กลยุทธ์ในการทำแบบทดสอบภาษาอังกฤษด้านการอ่าน แบบตัวเลือก ของนักศึกษาไทยระดับปริญญาตรี งานวิจัยนี้มีวัตถุประสงค์เพื่อระบุกลยุทธ์ในการทำแบบทดสอบ ที่ใช้มากที่สุด และศึกษาความแตกต่างในการใช้กลยุทธ์ระหว่างผู้เรียนที่มีผลสัมฤทธิ์ทางการเรียน ภาษาอังกฤษสูงและผู้เรียนที่มีผลสัมฤทธิ์ทางการเรียนภาษาอังกฤษต่ำ กลยุทธ์ในการทำแบบทดสอบ แบ่งเป็นสองประเภท คือ กลยุทธ์ในการจัดการกับฐานความรู้ และกลยุทธ์ที่ไม่ได้อ้างอิงฐาน ความรู้ ซึ่งได้ปรับมาจากกลยุทธ์ที่เสนอโดย โคเฮิน (1998) และเนโว (1989) ผลการวิจัยระบุว่า มีการใช้กลยุทธ์การอ่านซ้ำเพื่อความกระจ่าง และการค้นหาจุดสำคัญเพื่อเชื่อมโยงกับเนื้อหามากที่สุด และมีความแตกต่างในการใช้กลยุทธ์ในการทำแบบทดสอบระหว่างผู้เรียนที่มีผลสัมฤทธิ์ทางการเรียน ภาษาอังกฤษสูงและผู้เรียนที่มีผลสัมฤทธิ์ทางการเรียนภาษาอังกฤษต่ำ

**คำสำคัญ:** กลยุทธ์ในการทำแบบทดสอบ สมรรถนะทางภาษา การทดสอบการอ่านเพื่อความเข้าใจ แบบตัวเลือก ความแตกต่างในสมรรถนะทางภาษา ผู้เรียนชาวไทยที่เรียนภาษาอังกฤษ เป็นภาษาต่างประเทศ

## **Abstract**

Recently, the importance of test-taking strategies and the issue of language ability levels have become significant interests in the research field of language assessment. There has been little research on test-taking strategies utilized for reading tests, particularly in the context of Thai EFL learners. With this in mind, this research investigated test-taking strategies employed by undergraduate students at a Thai university taking a multiple-choice (MC) reading comprehension test. The research aimed to identify the most frequently used strategies, and different strategy use, between “proficient” and “less proficient” learners. Test-taking strategies were classified mainly by adapting from Cohen (1998) and Nevo (1989): Test-management strategies and test-wiseness strategies. The results revealed that Reread for Clarification and Find the Key Point Connected to the Context are the most frequently used strategies. Differences in strategies used by proficient and less-proficient EFL learners were also demonstrated.

**Keywords:** Test-taking Strategies, Language Ability, Different Language Proficiency, Multiple-Choice Reading Comprehension Test, Thai EFL Learners

## Introduction

There is no language test that can measure a person's language performance with 100% accuracy. This is because the learners' knowledge about the target language and their ability to use it, is a part of the language test performance. The other part depends on their test-wiseness, which is independent of the language knowledge and skills (Cohen, 1998). Therefore, it is not uncommon for some L2 (English) test-takers to be able to improve their grades in the target language courses by carefully selecting the appropriate test-wiseness strategies, rather than using their actual language ability. Simply speaking, proficient students may get items wrong as a result of an adventurous inference, while less proficient students may select the appropriate alternative despite faulty reasoning. Therefore, it might be said that there are no good or bad choices of test-taking strategies for a given task, but the selected strategies depend on factors such as the respondents' cognitive flexibility, language knowledge and cognitive style at the time of attempting a question (Cohen, 1998; Cohen & Upton, 2006). If selected strategies are well matched to the mentioned factors, these may minimize "failure and enable students to take advantage of learning opportunities" (Feryal, 2007).

There are very few studies investigating how students with different language abilities

employ test-taking strategies, particularly in the Thai context. Some studies have focused on the relations between students' performance and other variables, such as types of reading tasks (see Cohen & Upton, 2007), test method effects (see Shohamy, 1984; Riley & Lee, 1996; Sawaki, 2005; Kobayashi, 2002), and reading strategies and assessment techniques (see Prapphal, 1995; Katib, 1997; Jarijitpaibul, 2002; Baker & Boonkit, 2004; Mejang, 2004; and Sucantajan, 2006). This study examines the types of test-taking strategies used by less proficient and those used by proficient students.

## Conceptual Background of Test-taking Strategies for MC Reading Comprehension

An approach to understanding a 'strategy' is to regard it as 'problem-solving' but not in the usual way of producing a solution. Cohen (1998) stated that it is best not to assume that any test taking strategy is a good or a poor choice for a given task. That evaluation depends on how individual test takers with their particular cognitive style profile and degree of cognitive flexibility, their language knowledge, and their repertoire of test taking strategies, employ the strategies for a given task. Some test takers may get by using a limited number of strategies, and using them well for the most part. Others may be aware of an extensive number of strategies, but may use only a few, if any of them, effectively.

In addition, certain strategies, while effective for one test-taker, may not work well for another test-taker.

Test-taking strategies are defined by Cohen and Upton (2007), as “those test-taking processes which the respondents have selected and which they are conscious of, at least to some degree” (p. 211). It seems to be the short-cuts to arriving at the answers.

The interest in test-taking strategies has grown over the last four decades. The number of studies on strategies carried out in the field of language testing focusing on the test-taking strategies used, has increased steadily (ex. Homburg & Spaan, 1981; Cohen, 1984, 1988, 1994; Anderson, 1989; Nevo, 1989; Bachman, 1990; Anderson et al., 1991; Tsagari, 1994; Purpura, 1999; Abanomey, 2002; Phakiti, 2003; Cohen & Upton, 2006, 2007). These studies have examined various types of test-taking strategies used in responding to test-items to validate testing formats, emphasizing how proficiency levels and other learner factors interact with the use of strategies and test performance.

Recent research involved strategies for MC reading tests. The classic statement of Messick (1989) might be relevant in emphasizing that “individuals performed the same task in different ways and even the same individual might perform in a different manner across items or on different occasions...” (Messick,

1989: 54). Supporting this statement, Cohen (1998) strongly believed that criticisms about the multiple-choice items can be validated by conducting test-taking strategy research with respect to the test itself, the testing situation, and with respondents. As a result, valuable insights and information into test-taking strategies utilized by test-takers during all test-situations can be obtained.

There are some studies of test-taking strategies among non-native English speakers. Some employed verbal reports as an approach in their studies (see Cohen, 1984; Anderson et al., 1991; Storey, 1997; Phakiti, 2003; Rupp et al., 2006), others utilized self-report checklists (see Nevo, 1989; Allen, 1995; Tsagari, 1994; Cohen & Upton, 2007; Abanomey, 2002). Cohen (1984) utilized verbal report data to identify the test-taking strategies employed by EFL students when taking MC reading and cloze test. It was found that students tend to match words in the distracters with the text and read questions before the text. Along with this line, Nevo (1989) attempted to describe the process of reading tests in L1 as compared to L2. The difference is the use of a self-report checklist, which is more valid than Cohen’s (1984) retrospective report (Ericsson & Simon, 1984). However, Allen (1995) argued that “data obtained by self-report checklists must be interpreted with caution” (p.134) after investigating the effect of Nevo’s checklist of test-taking strategies.

In addition, Cohen & Upton (2007) and Abanomey (2002) are some examples of researchers coming up with checklists for use by students in a test situation. Abanomey (2002) conducted a study on the effect of the authenticity of the text of the MC reading test used by adult Saudi EFL learners using 15 test-taking strategies self-report checklists. The findings showed that types of text did not affect the selection of strategies. This is also consistent with the study of Cohen & Upton (2007), showing that the participants worked toward understanding of the text.

Another two studies on test-taking strategies in test validation were conducted by Anderson et al. (1991) and Phakiti (2003). What makes these studies more interesting is the triangulation of data sources. Anderson et al. (1991) applied the triangulation approach with 28 university EFL students by combining the analysis of the retrospective protocols with the content analysis, and found that test-takers employed strategies differently depending on types of questions being asked. Phakiti (2003) investigated the relationship between the use of cognitive and metacognitive strategies on reading test, and found that metacognitive strategies were statistically positively related to cognitive strategies, ( $r = 0.76$ ). The triangulation approach was then accompanied by combining the test and questionnaire data with retrospective interviews of 384 Thai participants. The result

was that in regards to the relationships between strategies and test performance, cognitive and metacognitive strategies were both positively correlated with the reading test performance. Phakiti (2003) also compared the differences in strategy use and reading performance among more proficient, proficient, and less proficient students by means of MANOVA, and found significant differences among these groups. There was strong evidence suggesting more proficient students reported significantly higher use of metacognitive strategies than proficient ones, who in turn reported higher use of these strategies than less proficient students.

Regarding the study of levels of proficiency and reading proficiency, Cohen (1994) conducted a small-scale quantitative study using verbal report data to investigate how students with different language proficiency interacted with source texts in order to produce summary texts of their own. It was concluded that language ability is a significant variable with a great effect on the test-takers' reading scores. In support of this, it can be assumed from the studies of Block (1992) and Nassaji (2003) that the test-takers with higher language ability are likely to have higher level text processing skills, so their reading performances are likely to be better.

With regard to previous studies in Thai contexts, the studies of Prapphal (1995),

Katib (1997), and Jarijitpaibul (2002) provide information on reading assessment, language ability and reading strategies of Thai students. Prapphal (1995) studied the relationship between reading strategies and language background of Thai students in performing summary tests. The participants were divided into four groups based on their language background and reading strategies. A checklist of strategies for processing top-level rhetorical organization was employed to classify the participants into less-skilled readers and skilled readers. It was found that reading strategies and language background worked independently rather than interdependently when content and language were used as criteria. Skilled readers and less skilled readers did not differ significantly in performing the EAP summary tests at the end of an EAP course. Katib (1997) investigated reading comprehension monitoring strategies of 2<sup>nd</sup> and 4<sup>th</sup> year Thai university students. Sixteen participants were placed into two levels of language proficiency and asked to verbalize their thoughts while reading using the think-aloud task. The study explored whether different English proficiency levels have an effect on the participants' strategy use. The results demonstrated that there were only three strategies, out of 28 strategies, that had statistically significant differences between the two groups of proficiency. Also, Jarijitpaibul (2002) studied English reading strategies of

48 Thai school students with advanced and low reading comprehension ability. They were asked to verbalize their thoughts immediately after completing a reading test. The results were that the students with low reading comprehension ability used cognitive reading strategies most frequently and used affective reading strategies least frequently. In addition, there are also a few research studies regarding the survey of reading strategies of Thai university students (see Baker & Boonkit (2004) and Sucantajan (2006)), and the instruction of reading strategies (see Mejang (2004)).

So far, it can be seen that there have not been many research studies focusing on language ability and test-taking strategies, especially in the Thai context. Therefore, it is worth conducting a study on these variables, as presented in the present study.

The taxonomies of test-taking strategies have generally been based on criteria such as whether the target group chooses to respond meaningfully to the test items or use world knowledge of test format without using the skill that is being tested. Most of the existing taxonomies are quite elaborate in distinguishing types (See Oxford, 1990; Anderson et al., 1991; Oxford & Cohen, 1992; Purpura, 1997; Phakiti, 2003; Song, 2005; Cohen & Upton, 2006), and some become downright daunting with their multiple levels of subcategories (Cohen, 1984; Sarig, 1987;

Nevo, 1989; Bachman & Palmer, 1996; Cohen & Upton, 2007; Cohen, 2012). This study has adopted a different classification system based on the use of test-management strategies vs. test-wiseness strategies modified from Nevo (1989), Cohen (1998), Cohen & Upton (2007), Cohen (2012); and Alsheikh, (2011).

In this study, test-management strategies refer to strategies for responding meaningfully to the test items and tasks (Cohen, 2012), which included:

- 1 Make a mental note of the key points of question and search for the answer in the text accordingly (MN)
- 2 Extract key meaning of the text by questions (KQ)
- 3 Extract key meaning of the text by options (KO)
- 4 Reread/paraphrase the question for clarification (RRQ)
- 5 Find the key point or punctuation mark in the inserted sentence and connect to the context (MC)
- 6 Read the question and jump immediately to where the related text was (QT)
- 7 Infer text meaning by considering the options first and reread the related text portion (ORR)
- 8 Select options based on paragraph/passage's overall meaning (OM)

9 Select the option because it appears to have a word or word family from the passage in it (WF)

10 Select the option through background knowledge as an educated guess (BK)

On the other hand, test-wiseness strategies refer to strategies for using knowledge of test formats and other peripheral information to answer test items without going through the expected linguistic and cognitive processes (Cohen, 2012). These included:

- 1 Use the process of elimination to achieve an answer even though the option is not understood (PL)
- 2 Select the option because it appears to have the exact word from the passage in it (WA)
- 3 Select the option because it is longer or shorter than the others (LS)
- 4 Blind guess not based on any particular rationale (BG)
- 5 Select the option because there are familiar words in it (FW)

Many studies, dealing with both international and Thai language contexts, have reported that test-taking strategies seem to be the short-cuts to arriving at the answers (Cohen, 1998, 2006; Sucantajan, 2006; Cohen & Upton, 2007). However, although less proficient learners employed those strategies, they seem not to be successful in doing tests.

For this reason, this study also investigates the types of test-taking strategy that less-able students use in doing tests and the reasons for their lack of success.

This study mainly provides information about how proficient and less proficient learners invoked strategies in the process of testing. The results have numerous implications for language educators as they can potentially learn how proficient learners differ from less proficient learners in their use of test-taking strategies. Moreover, the study provides further insights into the roles of various types of test-taking strategies in expanding the language ability of Thai university students. Since the findings reveal the type of test-taking strategy used by proficient learners, this may suggest the need to provide the less proficient learners with specific strategies in doing the tests.

## **The Study**

This study forms part of The Study of the Relationship of Types of Test Tasks and Students Test-taking Strategies Used in Doing a Multiple Choice English Reading Comprehension Test, which was fully funded by University of the Thai Chamber of Commerce. This study investigated the employment of test-management and test-wiseness strategies by students with different language ability levels. The study posed two research questions: 1. Are there any differences between the test-takers with high and low

language ability levels in the use of test-taking strategies in doing a multiple choice reading test? If yes, to what extent is the effect size?, and 2. What test-taking strategies are likely to be used by less proficient students to improve their reading performance?

## **Methodology and Design**

### **Population and Sample**

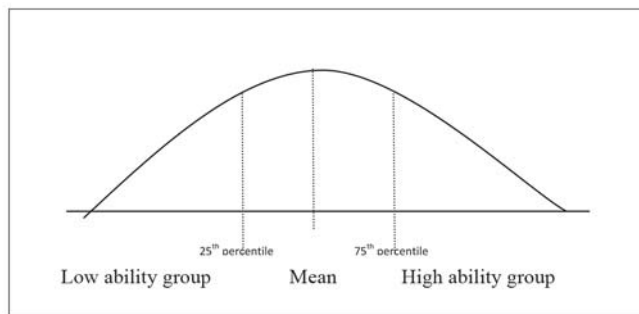
Using mixed method design, the participants were 200 second-year students enrolled in the English for Communication IV course of University of the Thai Chamber of Commerce in the second term of the academic year 2012. At that stage, the students had studied English for 15 years in school and university. They appeared homogeneous in terms of nationality and background knowledge as they were Thai students studying in the same university. Most of them were about the same age and it could be assumed that they had similar cultural and educational background.

In 'stratified random sampling', the population was divided into groups, then a random sample of a proportionate size was selected from each group. Since the population was 3000 students, the sample selected was 400 participants. The students were categorized into two groups, proficient and less proficient learners based on their scores received in their previous English course, by using the 25<sup>th</sup> and 75<sup>th</sup> percentiles as the cut off points



of the lowest and the highest quarters of the distribution. A hundred students who received scores lower than the first quartile points are placed in the less proficient learner group. Another hundred students who received scores

higher than the third quartile points are placed in the proficient learner group. As a result, there are 100 students labeled as proficient learners and the other 100 students are categorized as less proficient learners.



The students' mean scores equaled 53.72, with a S.D. of 6.36. Therefore, the 75<sup>th</sup> percentile and 25<sup>th</sup> percentile are 68 and 45 respectively. From this, the proficient group was defined as students with scores greater than 68 ( $n=100$ ), while the less proficient group included students whose scores were less than 45 ( $n=100$ ). Once students had been assigned to these two groups according to their language proficiency levels, each group was required to complete the Strategies Used in Reading Test Inventory (SURTI) that was attached to the MC reading comprehension test. The purpose was to investigate whether there was a significant difference between proficient and less proficient learners in terms of their use of test-taking strategies. The qualitative data was also collected. Content analysis of a retrospective verbal report protocol was employed to confirm the findings obtained from the quantitative approach for

the purpose of triangulation. Ten students from each group were randomly selected. The protocol was recorded, transcribed, and analyzed.

## Instrumentation

The main instruments used in this study were a self-report questionnaire; the Strategies Used in Reading Test Inventory (SURTI), the retrospective verbal protocol, and the reading comprehension test. The SURTI, a 22-item Likert-scale questionnaire, was designed to assess the frequency of students' strategies used in taking their MC reading comprehension test in UTCC BEST. The three-point scale on the SURTI ranged from rarely, sometimes, to mainly. The SURTI was written in Thai to avoid the problem of language being misunderstood (see Appendix1).

Items included in the SURTI were based

on two major types of test-taking strategies: test-management and test-wiseness strategies. The SURTI illustrated whether participants tended to utilize test-management strategies or test-wiseness strategies. Before the SURTI was conducted in this study, it went through a validation process. Content and construct validity was checked using an Item-Objective Congruence (IOC) test validating form; the classificatory agreement among three independent experts in the field of language teaching, who matched each item with the specific behavior domain to be observed, was 68.57%. There was consensus among the raters that the SURTI reflected the specific descriptions of the domain being tested. The measure of internal consistency for reliability of the SURTI using Cronbach's alpha was .80. This ensured that the test results would be consistent regardless of how many times the test was repeated.

With regard to the retrospective verbal protocol, the test-takers were requested to provide self-observational data right after taking the test. The language used was also Thai in order to minimize the problems of language ability. The subjects were required to report the test-taking strategies used and the process of how they arrived at the answers through the semi-structure interview. All verbal reports were recorded, transcribed, and translated before the content analysis was conducted.

The study also used the MC reading comprehension test task in one of the three sections of UTCC BEST as a tool for assessing test-takers' reading ability. The UTCC BEST is a large scale MC test developed by a group of experts in the field of assessment from University of the Thai Chamber of Commerce and will be used as an exit exam for assessing reading comprehension, grammar, structure, and listening comprehension proficiency in the academic year 2015. In this study, the UTCC BEST was used to evaluate the students' English proficiency after finishing all four English foundation courses, a requirement of the university, of which the scores have not been counted as credits. The SURTI questionnaire was to be completed after they finished all reading tasks, as per the instructions, in order not to disrupt the students performing the test tasks.

However, only the data from the reading comprehension section (30 items) was utilized in the study. A reading excerpt or paragraph includes three to five question items, according to the test tasks, i.e. reading about company profiles, marketing methods, demand and supply, international business, and products and services. The first part of SURTI was given to the test-takers separately, while the second part of SURTI was attached with each group of reading tasks to examine the strategies used in different test tasks.

## Appendix 1

### แบบสอบถาม

**คำชี้แจง** แบบสอบถามฉบับนี้จัดทำขึ้นเพื่อเก็บรวบรวมข้อมูลเกี่ยวกับกลยุทธ์ในการทำข้อสอบการอ่านเพื่อความเข้าใจ โดยข้อคำถามแบ่งออกเป็น 2 ตอน ดังนี้ ตอนที่ 1 ข้อมูลพื้นฐานของผู้ตอบแบบสอบถาม ตอนที่ 2 ข้อมูลเกี่ยวกับกลยุทธ์ในการทำข้อสอบการอ่านเพื่อความเข้าใจ

ข้อมูลจากการตอบแบบสอบถามนี้จะเป็นประโยชน์อย่างยิ่งสำหรับงานวิจัยที่เกี่ยวกับกลยุทธ์ในการทำข้อสอบการอ่านเพื่อความเข้าใจในวิชาภาษาอังกฤษของนักศึกษาระดับอุดมศึกษา จึงใคร่ขอความกรุณานักศึกษาทุกท่านได้โปรดตอบแบบคำถามทุกข้อตามความเป็นจริง โดยผู้วิจัยขอรับรองว่าคำตอบของนักศึกษาจะไม่มีผลกระทบใด ๆ กับนักศึกษาทั้งสิ้น และข้อมูลของนักศึกษาจะถือเป็นความลับ และการนำเสนอผลการวิเคราะห์ข้อมูลจะนำเสนอในภาพรวมเท่านั้น ขอขอบคุณที่กรุณาเสียสละเวลาของท่านในการตอบแบบสอบถาม

### ส่วนที่ 1: ข้อมูลทั่วไปของผู้ตอบแบบสอบถาม

1. เพศ:  ชาย  หญิง
2. อายุ:  ต่ำกว่า 17 ปี  17-19 ปี  20-22 ปี  23 ปีขึ้นไป
3. ศึกษาระดับปริญญาตรี ชั้นปีที่  ปีที่ 1  ปีที่ 2  ปีที่ 3  ปีที่ 4
4. คณะ/สาขาวิชา \_\_\_\_\_
5. เกรดเฉลี่ยสะสม \_\_\_\_\_
6. เกรดที่ได้จากวิชา English for communication \_\_\_\_\_
7. จำนวนปีที่เรียนวิชาภาษาอังกฤษมาแล้วจนถึงปัจจุบัน  
 1-5 ปี  6-10 ปี  11-15 ปี  16-20 ปี  ตั้งแต่ 21 ปีขึ้นไป

### ส่วนที่ 2: ข้อมูลเกี่ยวกับกลยุทธ์ในการทำข้อสอบการอ่านเพื่อความเข้าใจ

**คำชี้แจง** ให้ท่านทำเครื่องหมายตรงช่องความคิดเห็นที่ท่านคิดว่า “ตรงกับพฤติกรรมของท่านมากที่สุด” โดยมีระดับคะแนนจำนวน 3 ระดับที่สื่อความหมาย ดังนี้ มาก หมายถึง ท่านมีการกระทำหรือปฏิบัติในข้อนั้น ร้อยละ 70-100 ปานกลาง หมายถึง ท่านมีการกระทำหรือปฏิบัติในข้อนั้น ร้อยละ 40-69 และน้อย หมายถึง ท่านมีการกระทำหรือปฏิบัติในข้อนั้น ร้อยละ 1-39 ขณะที่ทำข้อสอบ นักศึกษาใช้กลยุทธ์ต่อไปนี้มากน้อยแค่ไหน

มาก	ปานกลาง	น้อย
<b>1. กลยุทธ์ในการทำข้อสอบการอ่าน Test-management strategies</b>		
	1.1 จำคำสำคัญของคำถามไว้ให้ดี แล้วหาคำตอบจากในเนื้อเรื่อง Make a mental note of the key points of question and search for the answer in text accordingly (MN)	
	1.2. อ่านคำถามเพื่อตั้งใจความสำคัญของเนื้อเรื่อง Extract key meaning of the text by questions (KQ)	
	1.3. อ่านตัวเลือกเพื่อตั้งใจความสำคัญของเนื้อเรื่อง Extract key meaning of the text by options (KO)	
	1.4. อ่านคำถามซ้ำหรือแปลความคำถาม เพื่อความกระจ่าง Reread/ paraphrase the question for clarification (RRQ)	
	1.5. ดูจากเครื่องหมายต่าง ๆ แล้วเชื่อมโยงกับเนื้อเรื่อง Find the key point or punctuation mark in the inserted sentence and connect to the context (MC)	
	1.6. อ่านคำถามแล้วข้ามไปต้นทอ่านส่วนเนื้อเรื่องที่เกี่ยวข้องทันที Read the question and jump immediately to where the related text was (QT)	
	1.7. สรุปความหมายของเนื้อเรื่องโดยพิจารณาจากตัวเลือกก่อน แล้วจึงอ่านส่วนของเนื้อเรื่องที่เกี่ยวข้องอีกครั้ง Infer text meaning by considering the options first and reread the related text portion (ORR)	
	1.8. เลือกตัวเลือกโดยดูจากความหมายกว้าง ๆ ของเนื้อเรื่อง Select options based on paragraph/passage's overall meaning (OM)	
	1.9. เลือกตัวเลือกที่มีคำศัพท์หรือคำที่มีความหมายใกล้เคียงปรากฏอยู่ในเนื้อเรื่อง Select the options because it appears to have a word or word family from the passage in it (WF)	
	1.10. เลือกตัวเลือกเพราะใช้ความรู้พื้นฐาน หรือมีความรู้ในเรื่องนั้นมาก่อน Select the option through background knowledge as an educated guess (BK)	
<b>2. กลยุทธ์ในการทำข้อสอบการอ่าน Test-wiseness strategies</b>		
มาก	2.1. ตัดตัวเลือกออกเพื่อเหลือคำตอบ ถึงแม้ว่าจะไม่เข้าใจในคำตอบนั้นก็ตาม Use the process of elimination to achieve an answer even though the option is not understood (PL)	น้อย
	2.2. เลือกคำตอบเพราะมีคำศัพท์ที่เหมือนกับในเนื้อเรื่อง แม้ว่าจะไม่สามารถแปลได้ก็ตาม Select the option because it appears to have the exact word from the passage in it (WA)	
	2.3. เลือกคำตอบเพราะตัวเลือกนั้นยาวหรือสั้นกว่าตัวเลือกอื่น Select the option because it is longer or shorter than the others (LS)	
	2.4. เลือกคำตอบเพราะเดาอย่างไม่มีเหตุผล Blind guess not based on any particular rationale (BG)	
	2.5. เลือกคำตอบเพราะมีคำศัพท์ที่คุ้นเคยอยู่ในตัวเลือกนั้น Select the option because there is familiar words in it (FW)	

## Data Collection

The sample size was 200 students, divided into two groups: proficient learners (n=100) and less proficient learners (n=100). The data from the study was gathered by using the SURTI and a Multiple Choice reading comprehension section in the UTCC BEST. The participants completed the self-report questionnaire (SURTI) right after completing each task of the reading comprehension section on the UTCC BEST. Following that, 10 students each were randomly selected from the proficient and less proficient learner groups. Then, the retrospective verbal report was obtained. The 20 students were asked to provide the protocols, through interview questions describing the strategies they used while completing the test.

## Data Analysis

Independent *t*-test and descriptive statistics were computed to determine whether there was any significant difference between the proficient and less proficient learners in their use of test-taking strategies in doing a Multiple Choice reading test. The effect size was also reported, using Cohen's *d*. The "d" is defined as the difference between two means divided by the SD of either group, where both samples are the same size. Content analysis using verbal protocols was then obtained from the 20 audio-recorded retrospective verbal

reports. This was to support the findings from the questionnaire analysis. However, the findings of both stages can triangulate each other's validity.

Qualitatively, the process of identifying the strategies used by participants was approached in much the same way as moves in a discourse genre are identified; strategic coding. A genre move refers to a section of a text that performs a specific communicative function; each move not only has its own purpose but also contributes to the overall communicative purpose of the genre (Bhatia, 1993; Swales, 1981, 1990). While a genre move represents a recognizable communicative event characterized by a communicative purpose, a test-taking strategy represents a specific and recognizable strategic choice made by the participant that is deliberate and purposeful and is intended to facilitate the test-taking task (Cohen, 2012). Verbalizations were classified into different strategies by determining what strategic function they revealed, including explicitly stated as well as obviously implied strategies (*ibid.*). Most strategies tend to be represented by sentences, but some were signaled by single words, others by multiple sentences.

After ensuring consistency, the researcher did the initial translation/transcription and strategy coding for each of the participants. All strategy coding was then checked by

three experts in the field. The researcher then checked coding one last time during analysis.

## **Results and Discussion**

To determine the difference in types of test-taking strategy used by the two groups, the means of the self-reported scores in the SURTI were compared. Table 1 shows the difference in the types of strategy used by the two proficiency groups.

An independent *t*-test was performed on the comparison of the means of test-taking strategies used by the two groups. It was found that the uses of four strategies were significantly different, another four were different, and the uses of seven strategies were not different in terms of the *t*-values. As for overall test-management strategies, the results indicated that there was a significant difference between the two groups, showing that the proficient learners employed test-management strategies significantly more than the less proficient learners. An examination of the subcategories revealed that the proficient learners used the strategies of MN, KO, KQ, QT, and WF significantly more frequently than the less proficient learners, the *t*-values being 2.557, 2.112 ( $p \leq .05$ ), 5.528, 3.833, and 3.861 ( $p \leq .01$ ) respectively. On the other hand, the less proficient learners utilized more RRQ strategy than the proficient learners ( $t=.030$ ,  $p \leq .05$ ). It might be because the test-taking strategies

demonstrated participants' monitoring of test-taking processes and their efforts to remediate problems encountered by adjusting comprehension and adopting fix-it strategies. Thus, these strategies confine themselves to the high proficiency group. In other words, the test-takers with higher proficiency in this study tended to be more conscious of what they were doing and did care when it came to selecting their answer in a test.

Although the results show that there are significant differences between proficient and less proficient learners in the use of six sub-strategies of test-management strategies, the size of these differences is rather small (Effect size: Cohen's *d* value=0.33). It means that the proficient learners and less proficient learners were a little different in the use of these six test-management strategies in doing MC reading comprehension test.

For the overall test-wiseness strategies, although there was no significant difference between the two groups, *t*-test statistics for individual test-wiseness strategies indicate significant differences occurring for two of the five strategies (WA and BG). However, it is interesting to note that the less proficient learners used WA and BG strategies more frequently than their proficient counterparts, the *t*-value being 7.78 ( $p \leq .01$ ), and -2.318 ( $p \leq .05$ ). This occurred probably because the two strategies, especially 'blind guess' (BG) are

surface strategies that do not involve making connections between known and unknown knowledge. It is possible that the less proficient learners, experiencing more difficulties due to their limited L2 knowledge, had to resort to these types of strategies more frequently to compensate for their limitations (Qingquan et al., 2008).

With regard to the effect size, the Cohen's  $d$  was employed. According to Cohen (1988), the estimated effect size was medium ( $d=0.52$ ), which means there were some differences between the proficient learners' and less proficient learners' use of two of test-wiseness strategies.

**Table 1** The 15 Test-taking Strategies Employed by the High- and Low-English Proficiency Groups Based on the SURTI

Strategies	Means			t-value	Sig	Mean Comparison
	Total	High proficiency	Low proficiency			
<b>Test-Management Strategies</b>						
1.1 Make a mental note of the key points of question and search for the answer in text accordingly (MN)	2.54	2.68	2.40	2.557	.011*	P>L
1.2 Extract key meaning of the text by questions (KQ)	2.42	2.76	2.08	5.528	.000**	P>L
1.3 Extract key meaning of the text by options (KO)	2.53	2.64	2.42	2.112	.036*	P>L
1.4 Reread/ paraphrase the question or options for clarification (RRQ)	2.66	2.54	2.78	-2.188	.030*	L>P
1.5 Find the key point or punctuation mark in the inserted sentence and connect to the context (MC)	2.66	2.68	2.64	0.202	.840	NS
1.6 Read the question and jump immediately to where the related text was (QT)	2.52	2.76	2.28	3.833	.000**	P>L
1.7 Infer text meaning by considering the options first and reread the related text portion (ORR)	2.27	2.29	2.25	0.243	.808	NS
1.8 Select options based on paragraph/passage's overall meaning (OM)	2.46	2.47	2.45	0.166	.868	NS

**Table 1** The 15 Test-taking Strategies Employed by the High- and Low-English Proficiency Groups Based on the SURTI (continued)

Strategies	Means			t-value	Sig	Mean Comparison
	Total	High proficiency	Low proficiency			
1.9 Select the options because it appears to have a word or word family from the passage in it (WF)	2.62	2.80	2.44	3.861	.000**	P>L
1.10 Select the option through background knowledge as an educated guess (BK)	1.77	1.79	1.75	0.660	.510	NS
Total	2.44	2.54	2.35	2.000	.047*	P>L
<b>Test-Wiseness Strategies</b>						
2.1 Skip the question and return to it later (SQ)	1.88	1.90	1.86	0.333	.739	NS
2.2 Select the option because it appears to have the exact word from the passage in it (WA)	2.35	1.93	2.77	7.789	.000**	L>P
2.3 Select the option because it is longer or shorter than the others (LS)	1.92	1.86	1.98	-1.195	.233	NS
2.4 Blind guess which was not based on any particular rationale (BG)	2.25	2.14	2.37	-2.318	.022*	L>P
2.5 Select the option because there are familiar words in it (FW)	1.77	1.89	1.65	-0.296	.768	NS
Total	2.02	2.10	1.93	0.955	.341	NS

P = Proficient learners, L = Less proficient learners, \* p ≤ .05, \*\* p ≤ .01



Investigation of differences showed strongly significant differences in the use of KQ, QT, WF and WA, and slightly significant differences in the use of MN, KO, RRQ, and BG. Regarding the significant difference in employing the strategies of 'extracting key meaning of test by question and also options' (KQ) and (KO), it may be inferred that proficient learners often give sufficient attention to elements of test-items and tasks, especially those with the highest point values on the test, while less proficient learners likely will not. This phenomenon could probably be explained by background knowledge of language resources. The proficient test-takers were equipped with more knowledge of the target language and had relatively richer resources to draw upon in completing the reading test tasks, while the limited knowledge of less proficient test-takers seemed to be an obstruction to their use of test-management strategies.

As for the strategies of 'reading the question and jumping to where the related text was' (QT), 'selecting the options because it appears to have a word or word family from the passage in it' (WF), and 'making a mental note of the key points of question and search for the answer in text' (MN), proficient learners' more frequent use of these kinds of strategies indicate that they tend to use meaning-based cues and semantic process to evaluate whether they have understood what they read (Block, 1992; Nassaji, 2003).

This seems to support the idea that the high proficiency group has a tendency to employ this type of strategies probably due to their greater repertoire of English resources. They tend to have a larger stock of vocabulary in their word-banks than the less proficient learners.

In addition, there were three types of test-taking strategies that were employed quite differently by the two groups: RRQ, WA, and BG. It is interesting to note that the less proficiency group demonstrated more use of these types of strategies.

Although the strategy of 'rereading the question and options' (RRQ) was a subcategory of test-management strategies, less proficient learners employed it most. It seems to support the idea that the less proficiency group may be attempting to go back and forth between a passage and a given question in order to obtain more information about just what to be looking for. It might reflect the fact that they lack confidence or linguistic knowledge to decide on the answer. So they might give careful consideration to all the alternative choices and questions and to craft a rationale for why one choice is better than the others.

Regarding test-wiseness strategies, it is not surprising that the less proficient learners tend to utilize the two strategies, 'appearing to have the exact word from the passage in option' (WA) and 'blind guess' (BG), since

they are strategies that assist respondents in obtaining responses – very possibly the correct ones – without engaging the second-language (L2) knowledge and performance ability. However, although the less proficiency group employed these types of strategies more frequently, it seems that they applied the test-wiseness strategies ineffectively to compensate for their lack of understanding of the text. As mentioned, test-takers who experienced problems with vocabulary or sentence structures might seek to compensate for these problems by directing more of their attention to other strategies they think might help.

In retrospective verbal protocol, the test-takers carried out the task and then produced their verbalization after the reading task was completed (Green, 1998; Ericsson & Simon, 1984). Cohen (2006) states that through verbal report, we are able to explore the test-takers' thinking processes. Cohen & Upton (2006) agree that one of the most widely used tools in test-taking strategy research is the verbal report. Content analysis was considered along with the results of SURTI to examine specific types of test-taking strategies used by the two groups.

The following are the results of qualitative data analysis with explanations relating to each type of test-taking strategy used. It was found that the findings correspond with

the results of the *t*-value section; there is a significant difference in the use of eight types of test-taking strategies between the two groups of students. MN, KQ, KO, OT, and WF were employed by the high-ability group more frequently than the low-ability group, while RRQ, WA, and BG were utilized more frequently by the lower ability group. Thus, it seems that these findings confirm what was found in the quantitative section.

The first explanation relates to the use of the strategies of 'making a mental note of the key points of question and search for the answer in text accordingly' (MN) and 'reading the question and jumping immediately to where the related text was' (QT). According to Cohen (2006), students might try to scan the text to locate local features that a question asked for without an effort to understand the whole paragraph. This may make such questions easier. It was found that the group of proficient learners employed these types of test-management strategies more (see Excerpt 1 and Excerpt 2). This finding is in line with the studies of Nassaji (2003) and Block (1992) that stated that the high proficiency group tend to make an attempt to demystify the reading process or else looked into the mental processes the participants went through while responding to the reading activities. Proficient learners seem to comprehend the text at a global level. They might predict information accurately in context and using lexical and

structural knowledge to cope with linguistic difficulties (Gordon, 1987). This confirms the results of the *t*-test section that the proficiency

group preferred to employ these types of strategies over the lower one.

**Excerpt 1** Words and Sentences Produced in Using the Strategy of Making a Mental Note of the Key Points of Question and Searching for the Answer in Text Accordingly (MN)

**Proficient learners**

**“Please describe your thinking processes in order to arrive at the answer while doing the MC reading comprehension test”**

*“...I feel like I have an advantage to be able to draw the framework of the article in my head. When I read the questions, I constantly remembered the part of the text that corresponded to the test questions...” (Participant 5)*

*“...This question asked about “the marketing method”. Therefore, I highlighted the keyword in my mind and looked around where the related text was located...” (Participant 9)*

**Excerpt 2** Words and Sentences Produced in Using the Strategy of Reading the Question and Jumping Immediately to Where the Related Text was (QT)

**Proficient learners**

*“...I read the question and went back to the text again if the question explicitly stated where the related sentences are in text. It is much easier when I segmented the whole passage into small chunks and tried to identify the key points in the text from each question...” (Participant 5)*

*“...I will go through the questions first...and then I take some of the points from the question briefly. After that, I will go through the passage again, so I will know what to look for...” (Participant 1)*

The second explanation relates to the use of three of the test-management strategies: extracting key meaning of text through questions (KQ), extracting key meaning of text through lists of options (KO), and selecting the options because it appears to have a word or word family from the passage in it (WF), as the test-takers might need clues from questions as well as options to reach the answer. This is in line with Tsagari (1994) and Cohen and Upton (2007) where the test-takers might have ‘grouped together’ their existing information.

The results of both content analysis (see Excerpt 3, Excerpt 4, Excerpt 5) and the SURTI indicate that the proficiency group was markedly more likely to employ these strategies; KQ, KO, and WF, than the other group. The test-takers tend to use inferring meaning from context as they might need clues from questions as well as options to reach the answer. Almost all proficient learners claim that they make an attempt to infer the meaning of lexical items based on the context. Previous studies have shown that these particular

strategies enable users of the target language to deal more successfully with reading tasks (Hosenfeld, 1978; Wenden & Rubin, 1987). Besides, the ability to infer word meaning

has long been recognized as an important skill in the reading literature (Alderson 2000). These might be the reasons for why proficient learners prefer using these types of strategies.

**Excerpt 3** Words and Sentences Produced in Using the Strategy of Extracting Key Meaning of Text through Questions (KQ)

**Proficient learners**

*"...This question asks "which is not one of the intercultural communication skills in the global workplace?" So I realized that the word "skill" is probably the key word of this paragraph.."* (Participant 2)

*"...Personally, I know that the test questions would lead the focus. That's why I thought it was important to understand the test-developer's emphasized details as reflected by the questions on that specific passage..."* (Participant 4)

**Excerpt 4** Words and Sentences Produced in Using the Strategy of Extracting Key Meaning of Text through Lists of Options (KO)

**Proficient learners**

*"...Looking at the options helped me to understand the passage easier. For example, vocabulary items in each option gave me a whole picture of what the text was talking about, since each choice was related in meaning such as synonym or antonym, one way or another..."* (Participant 4)

*"...I paid attention to the options especially in doing the grammatical task. When I was not sure, I categorized parts of speech of each option and then considered the question what would be the best selection to fill in..."* (Participant 5)

**Excerpt 5** Words and Sentences Produced in Using the Strategy of Selecting the Options Because It Appears to Have a Word or Word Family from the Passage in It (WF)

**Proficient learners**

*"...In the paragraph, it mentioned about "... not harmful or cause birth defects", and there happened to be an option that said "...safely used during pregnancy". I thought these two sentences were paraphrases, thus I chose this one..."* (Participant 10)

*"...I discovered a key word: 'buying goods', but these were mainly related to the frequency with which certain words appeared in the text, such as import, purchase, and international business. So I select that option..."* (Participant 9)

The use of rereading or paraphrasing the question or options for clarification strategy (RRQ) is the strategy used by students who read the text more than once when either there is some extra time or when it includes many unfamiliar lexical items. The strategy is not usually employed by the candidates' preferred cognitive strategies (Stathopoulou & Nikaki, 2009). Although it is one of the test-management strategies, the less proficient learners employed the RRQ strategy more than their proficient counterparts. It is in line

with the study of Katib (1997), which pointed out that the lower proficiency group used 'rereading' more frequently due to their more limited English knowledge. The examples in Excerpt 6 presents that less proficient learners focus on specific parts of the text and re-read them when a given question involves them in searching for specific information. It also seems to save time and effort (Cohen, 2006). The low proficiency test-takers seemed to benefit from this test-taking strategy as they utilize it most in the test.

**Excerpt 6** Words and Sentences Produced in Using the Strategy of Rereading or Paraphrasing the Question or Options for Clarification Strategy (RRQ)

**Less proficient learners**

*"...When the question included the chunk of difficult words or phrases, I changed or paraphrased them with my words. It can save time and avoid confusing, although I didn't really understand the exactly meaning of those phases..." (Participant 15)*

*"...I usually read in order to get the large picture of the test. Sometimes, comprehension problems occur, I reread back and forth for specific information..." (Participant 11)*

This result substantiates the previous research, suggesting that test-takers read the passage as much as possible to enhance global comprehension in order to achieve higher scores (Daneman & Hannon, 2001) and appears to contradict some studies (Cohen, 1984), where it is not necessary for the test-takers to read or comprehend the test passages.

In fact, with proficient learners' ability to understand the text, they were able to attend to higher-level comprehension processes,

such as to distinguish the main points from supplementary details, and to skip those parts of the passage that were not covered in the questions. They were also able to paraphrase the text correctly given the options available.

However, given that the less proficient learners adopted a repertoire of strategies that were similar to those of proficient ones, the difference in their performance was shown to be in their inability to regulate these management strategies. Alderson (1991) argued that it is important to know when

and why to employ certain specific strategies and how to employ them successfully. The findings show that lower-proficiency test-takers tend to apply the test-management strategies ineffectively. It might be because they were unable to identify the text's main points, even after reading the questions. That is why they selected their chosen options because it contained a word or phrase that appeared in the text instead of conforming meaning by context. It can be seen that the less proficient test-takers often fell into this trap if they are unable to search for contextual support and relied only on shared words between the text and the response options.

According to test-wiseness strategies, content analysis also agreed with the results of

the SURTI that the less proficient learners used the strategy of selecting the option because it appears to have the exact word from the passage in it (WA) more than those in the high proficiency group. The high proficiency participants did not find it useful. This supports the finding of Cohen (1998) that less proficient learners tended to process information at the local (word) level, not relating isolated bits of information to the whole text. They used individual word-centered strategies like matching or copying words from text (ibid, p. 100). The examples in Excerpt 7 illustrates that the less proficient learners might use this strategy because of the lack of linguistic knowledge. Thus, this led to a slow reading speed and a lack of comprehension.

**Excerpt 7** Words and Sentences Produced in Using the Strategy of Selecting the Option Because It Appears to Have the Exact Word from the Passage in It (WA)

**Less proficient learners**

*"...I tried to match any words in the options with the same ones in the text, and then decided to choose the option containing the same words with the text..." (Participant 19)*

*"...In my way... actually I don't need to understand the full text. I just need to know the place and I can find the exact words, exactly all these things for the answer..." (Participant 12)*

The strategy of blind guessing (BG) consists of test-takers tending not to monitor or evaluate their predictions, nor to modify their predictions based on the text. It is one of the test-wiseness strategies that helps the test-takers select the answer in the MC tests without knowing the content and the language

skills tested. Liontou (2009) also concludes that guessing the meaning of unknown words is one of the most frequently used strategies among candidates.

Excerpt 8 illustrates the use of this type of strategy. The results showed the BG strategy being employed more by the

less proficient learners, who might either be unable to comprehend the reading passages or misunderstood them because of decoding, language and vocabulary

difficulties. Insufficient vocabulary knowledge and text comprehension impacted low proficiency test-takers' decision to adopt more strategies related to test-wiseness.

#### **Excerpt 8** Words and Sentences Produced in Using the Strategy of Blind Guessing (BG)

##### **Less proficient learners**

*"...I thought that the answers from the four options should occur with equal frequency. That's why, for the rest of questions that I did know the answers, I chose C since it was selected less than other options." (Participant 20)*

*"...At the end of the text, I came up with wild guesses and selected options for no reason. Just the time's up..." (Participant 14)*

The results demonstrated that *test-wiseness strategies* were adopted by both high and low proficiency test-takers. It is interesting that two test-wiseness strategies (WA and BG) were employed by low proficiency participants more often than high proficiency ones in this study. However, although the lower proficiency participants utilized this type of strategies more frequently, it seemed that they applied the test-wiseness strategies ineffectively or used more incorrect strategies to compensate for their lack of understanding of the text. The findings from the think-aloud protocols revealed that low proficiency participants relied on test-wiseness strategies to compensate for their insufficient linguistic knowledge and failure to understand the text. As mentioned, the test-takers experiencing problems with vocabulary or sentence structures might seek to compensate for these problems by directing more of their attention to other strategies that they

think might help. Therefore, low proficiency participants applied significantly more test-wiseness strategies when they encountered problems in determining the best option, which happened frequently.

## **Conclusions and Implications**

This finding supports previous research (Alderson, 2000; Block, 1992; Huang et al., 2006; Phakiti, 2003) that there are clear distinctions between the strategies that L2 proficient and less proficient test-takers use. This leads to the confirmation that the proficient learners used test-management strategies, such as MN, KQ, KO, QT and WF, whereas the less proficient learners tended to employ more test-wiseness strategies, like WA and BG. The proficient learners tended to attempt to group the existing information together, and made reasonable connection between the text, question, and options. Therefore, the answers were derived by

their analysis and synthesis based on the context. The less proficient learners tried to match the words from the test options with the text. They did not orient their reading based on contextual support and relied only on individual words which focused on isolated information.

Although test-wiseness strategies were not considered as primary strategies used by proficient test-takers, they should not be ignored. In test-taking situations, test-wiseness strategies are beneficial to test-takers' performance if they are applied appropriately. Test-takers should relate important points in the text to their available resources in order to comprehend the text as a whole and to modify their connections according to the text content. Test-takers should adopt test-wiseness strategies carefully as a last resort.

Also, some contributions related to test-taking strategies and pedagogy also emerged. Reading teachers need to go beyond their traditional roles by providing opportunities for their students to become familiar with and to apply such test-taking strategies. Although it could be a tempting idea to compare what poor and good readers do, the results may not be easily applicable to the teaching situation. As Cohen (1986) cautions, "strategies may not be inherently good or bad for a given reader. Rather, they may or may not promote successful comprehension of a text, depending

on the particular reader, the particular text, the context in which the reading is going on, and the choice of other strategies in conjunction with the chosen one" (pp. 132-133). His suggestion is that the aim of the research should not be describing the 'ideal' reader and prescribing to all students how to read. Instead, research using some mentalistic measures, such as think-aloud, should aim to describe "reading behavior that promotes or deters comprehension" (p. 133).

The question of whether test-taking strategies should be taught is a contentious one. The results of this study suggest that it might be profitable to teach students not only linguistic knowledge, but also test-taking strategies. If students have appropriate test-taking strategies, they will be able to achieve improved results by utilizing their skills such as grouping, inferencing and evaluating (Cohen, 1984). One possible way to help less proficient learners improve their effective test-taking process may be to introduce them to the use of test-management strategies employed by proficient learners, and to raise their awareness of strategies for solving potential language problems, as suggested by Cohen (1998) and Cohen and Upton (2007). More importantly, an explicit program of this teaching and/or training should be designed specifically for implementation in Thai institutions.



## References

- Abanomey, A. 2002. **The Effect of Texts' Authenticity on Reading-comprehension Test Tasking Strategies Used by Adult Saudi Learners of English as a Foreign Language**. PhD dissertation. Arizona State University.
- Alderson, J.C. 1991. **Bands and Scores**. In J.C. Alderson and B. North (Eds.), *Language Testing in the 1990s* (pp. 71-86). London: Modern English Publications and the British Council.
- Alderson, J.C. 2000. **Assessing Reading**. Cambridge: Cambridge University Press.
- Allen, C.L. 1995. **Case Marking and Reanalysis: Grammatical Relations from Old to Early Modern English**. New York: Oxford University Press.
- Alsheikh, N. 2011. "Three Readers, Three Languages, Three Texts: The Strategic Reading of Multilingual and Multiliterate Readers". **The Reading Matrix** 11,1: 34-53.
- Anderson, N.J., Bachman, L., Perkins, K., & Cohen, A. 1991. "An Exploratory Study into the Construct Validity of a Reading Comprehension Test: Triangulation of Data Sources". **Language Testing** 8: 41-66.
- Anderson, N.J. 1989. **Reading Comprehension Tests versus Academic Reading: What Are Second Language Readers Doing?** Unpublished PhD dissertation, Austin: University of Texas.
- Bachman, L.F. 1990. **Fundamental Considerations in Language Testing**. Oxford: Oxford University Press.
- Bachman, L.F. & Palmer, A.S. 1996. **Language Testing in Practice**. Oxford: Oxford University Press.
- Baker, W. & Boonkit, K. 2004. "Learning Strategies in Reading and Writing: EAP Contexts". **RELC Journal** 35,3: 299-328.
- Bhatia, V.K. 1993. **Applied Genre Analysis: a Multi-perspective Model**. Hong Kong: City University of Hong Kong.
- Block, RA. 1992. **Prospective and Retrospective Duration Judgment: The Role of Information Processing and Memory**. In F. Macar, V. Pouthas., & W.J. Friedman (Eds.), *Time, Action and Cognition: Towards Bridging the Gap*. (pp. 141-152). Dordrecht: Kluwer Academic.
- Cohen, A.D. 1984. "Studying Second Language Learning Strategies: How Do We Get the Information?" **Applied Linguistics** 5,2: 131-146.
- Cohen, A.J. 1988. "The Use of Verbal Report Data for a Better Understanding of Test-taking Processes". **Australian Review of Applied Linguistics** 11: 30-42.
- Cohen, A.D. 1994. **Assessing Language Ability in the Classroom**. (2<sup>nd</sup> ed.). Newbury house: Heinle & Heinle.

- Cohen, A.D. 1998. **Strategies in Learning and Using a Second Language**. Harlow: Addison Wesley.
- Cohen, A.D. 2006. The Coming of Age of Research on Test-taking Strategies. **Language Assessment Quarterly** 3,4: 307-331.
- Cohen, A.D. 2012. **Strategies: The Interface of Styles, Strategies, and Motivation on Tasks**. In S. Mercer, S. Ryan, & M. Williams (Eds.), *Language Learning Psychology: Research, Theory, and Pedagogy* (pp. 136-150). Basingstoke, England: Palgrave Macmillan.
- Cohen, A.D., & Upton, T. 2006. **Strategies in Responding to the New TOEFL Reading Tasks**. Monograph Series: ETS.
- Cohen, A.D., & Upton, T. 2007. "I Want to Go Back to the Text": Response Strategies on the Reading Subtest of the New TOEFL. **Language Testing** 24,2: 209-250.
- Daneman, M., & Hannon, B. 2001. "Using Working Memory Theory to Investigate the Construct Validity of Multiple-choice Reading Comprehension Tests such as the SAT". **Journal of Experimental Psychology General**, 130: 208-223.
- Ericsson, K.A., & Simon, H.A. 1984. **Protocol Analysis: Verbal Reports as Data**. Cambridge, MA: MIT. Press.
- Farr, R., Pritchard, R., & Smitten, B. 1990. "A Description of What Happens When an Examinee Takes a Multiple-choice Reading-comprehension Test". **Journal of Educational Measurement** 27: 209-26.
- Feryal, C. 2007. "Foreign Language Anxiety". **Iranian Journal of Language Studies** 1,2: 133-144.
- Gordon, C. 1987. **The Effect of Testing Method on Achievement in Reading Comprehension Tests in English as a Foreign Language**. Unpublished master's thesis, Tel-Aviv University, Ramat-Aviv, Israel.
- Green, A.J.F. 1998. **Using Verbal Protocols in Language Testing Research: A Handbook**. Cambridge, UK: Cambridge University Press.
- Homburg, T.J., & Spaan, M.C. 1981. **ESL Reading Proficiency Assessment: Testing Strategies**. In M. Hines & W. Rutherford (Ed.), *TESOL '81* (pp. 25-33). Washington, DC: TESOL.
- Hosenfeld, C. 1978. Learning about Learning: Discovering Our Students' Strategies. **Foreign Language Annals**. 9: 117-129.
- Huang, L., Knight, K., & Joshi, A. 2006. **Statistical Syntax-directed Translation with Extended Domain of Locality**. In *Proceedings of AMTA*.
- Jarjittpaibul, D. 2002. **A Study on English Reading Strategies of Mathayom Suksa Five Students with Different English Reading Comprehension Abilities**. MA Thesis. Faculty of Education, Chulalongkorn

- University.
- Katib, A. 1997. **A Descriptive Study of EFL Students' Comprehension Monitoring Strategies When Reading in English.** A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy, University of Victoria.
- Kobayashi, M. 2002. "Method Effects on Reading Comprehension Test Performance: Text Organization and Response Format". **Language Testing** 19: 191-218.
- Liontou, T. 2009. "Investigating the Effect of Text and Reader Variables on the Comprehension Difficulty of English KPG Reading Texts: A Multifaceted Approach". **Proceedings of the 4<sup>th</sup> Annual South-east European Doctoral Students Conference**, 6-7 July. Thessaloniki, Greece.
- Mejang, A. 2004. **The Development of an English Reading Strategy Instruction Model Based on Collaborative Learning Principles for Enhancing Reading Learning Outcomes of University Students.** Unpublished doctoral dissertation, Chulalongkorn University, Thailand.
- Messick, S. 1989. **Validity.** In R.L. Linn (Ed.), *Educational Measurement* (3<sup>rd</sup> ed.) (pp. 13-103). New York: Macmillan.
- Nassaji, H. 2003. "Higher-level and Lower-level Text Processing Skills in Advanced ESL Reading Comprehension". **The Modern Language Journal** 87,2: 261-276.
- Nevo, N. 1989. "Test-taking Strategies on a Multiple-choice Test of Reading Comprehension." **Language Testing** 6: 199-215.
- Oxford, R.L. 1990. **Language Learning Strategies: What Every Teacher Should Know.** New York: Newbury House.
- Oxford, R. & Cohen, A.D. 1992. "Language Learning Strategies: Crucial Issues of Concept and Classification". **Applied Language Learning** 3,1-2: 1-35.
- Phakiti, A. 2003. "A Closer Look at the Relationship of Cognitive and Metacognitive Strategy Use to EFL Reading Achievement Test Performance". **Language Testing** 20,1: 26-56.
- Prapphal, K. 1995. "The Relationship between the Reading Strategies and Language Background of Thai Science Students in Performing Summary Tests". **PASAA** 25: 68-76.
- Purpura, J.E. 1999. **Learner Strategy Use and Performance on Language Tests: A Structural Equation Modeling Approach.** Cambridge: Cambridge University Press.

- Qingquan, N., Chatupote, M. & Teo, A. 2008. "A Deep Look into Learning Strategy Use by Successful and Unsuccessful Students in the Chinese EFL Learning Context". *RELC Journal: A Journal of Language Teaching and Research* 39,3: 338-358.
- Riley, G.L., & Lee, J.F. 1996. "A Comparison of Recall and Summary Protocol as Measures of Second Language Reading Comprehension". *Language Testing* 13: 173-189.
- Rupp, D.E., Gibbons, A.M., Baldwin, A.M., Snyder, L.A., Spain, S.M., Woo, S.E. 2006. "An Initial Validation of Developmental Assessment Centers as Accurate Assessments and Effective Training Interventions". *Psychologist Manager Journal* 9: 171-200.
- Sarig, G. 1987. **High-level Reading in the First and in the Foreign Language: Some Comparative Process Data**. In J. Devine, P. Carrell, & D. Eskey (Eds.), *Research in Reading in English as a Second Language* (pp. 105-120). Washington, D.C.: Teachers of English to Speakers of Other Languages.
- Sawaki, Y. 2005. **Languages and Linguistics in Papua**. [A Course Book]. The State University of Papua: Manokwari.
- Shohamy, E. 1984. "Does the Testing Method Make a Difference? The Case of Reading Comprehension?". **Reading Research Quarterly** 17: 229-255.
- Song, X. 2005. "Language Learner Strategy Use and English Proficiency on the Michigan English Language Assessment Battery". **Spain Fellow Working Papers in Second or Foreign Language Assessment** 3: 1-26.
- Stathopoulou, M., & Nikaki, D. 2009. "Test-taking Strategies in the KPG Reading Test: Instrument Construction and Investigation Results". *JAL* 25: 129-148.
- Sucantajan, S. 2006. **A Survey Study of English Reading Strategies in English Comprehension of First Year English Major Students at Chakrabongse Bhuvanath Campus**. Master Thesis, Thammasat university.
- Swales, J. 1981. **Aspects of Article Introductions**. Birmingham, UK: Prentice Hall.
- Swales, J. 1990. **Genre analysis: English in Academic and Research Setting**. Cambridge: Cambridge University Press.
- Tsagari, C. 1994. **Method Effect on Testing Reading Comprehension: How Far Can We Go?** Unpublished M.A. thesis. University of Lancaster, U.K.
- Wenden, A.L. & Rubin, J. 1987. **Learner Strategies in Language Learning**. UK: Prentice Hall.



**Dr. Suttinee Chuanchaisit** received her Doctoral Degree in Language Assessment and Evaluation (International Program) from Chulalongkorn University, and Master's Degree from the University of Warwick, UK. She was the Head of Business English Department, and Director of UTCC Language Center. She is currently working as Acting Vice President of Foreign Affairs Division, University of the Thai Chamber of Commerce. She is also interested in the issues of test-taking strategies, learning strategies, and language testing.