

The Relationship between Test-Taking Strategies and Thai Students' Reading Comprehension Test Performance

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Received: 10/14/2021

Accepted: 2/2/2022

Published: 3/24/2022

Abstract

Tests are often applied to evaluate students' academic performance in all educational contexts. In order to be successful in the tests, students are required not only to possess the knowledge of the subject, but also test-taking strategies which enable them to gain higher test score. The present study was aimed at investigating the relationship between the students' test-taking strategies use and their reading comprehension test performance and the types and frequency of the test-taking strategies used among high and low proficiency students. This research employed the mixed-methods approach. A total of sixty eight university students at an international university in Thailand took part in this study. They were asked to take a reading comprehension proficiency test and a questionnaire to find out about their use of the test taking strategies during the test. The results revealed that the test-taking strategies had a significantly positive influence on students' reading comprehension test performances. Although high proficiency students used the test-taking strategies more frequently than those in low proficiency group, both groups of students were found to similarly employ a variety of techniques to cope with the challenges in the reading test. The findings of this present study not only empirically verified the benefits of the test-taking strategies, but also emphasizes the necessity of the formal instruction of the strategies used in the English tests, especially the ones considered most effective for tertiary students, to ensure their greater academia success.

Keywords: Reading comprehension, test-taking strategies, test performance, test management strategies, Thai students

Cite as: Ketworrachai, C., & Sappapan, P. (2022). The Relationship between Test-Taking Strategies and Thai Students' Reading Comprehension Test Performance. *Arab World English Journal*, 13 (1) 87-103. DOI: <https://dx.doi.org/10.24093/awej/vol13no1.6>

Introduction

Tests or exams are an assessment tool administered to measure and evaluate test takers' knowledge and skills or even learning progress in a particular topic, subject or issue, especially in educational contexts of all levels (Cohen, 1998; Roger & Harley, 1999). Still, a number of ELT scholars point out that the success in the tests is not only dependent on content knowledge, but also on test-taking strategies as well as individual students' academic background. That is to say, test performance or test scores involve a wide range of variables, such as linguistic knowledge, world knowledge, analytical skills, time management skills, or processing capacity, just to name some. (Cohen, 2006; Dodeen, 2015; Hambleton, Swaminathan & Rogers, 1991; Ajideh & Nourdad, 2019; Lee, 2011). Unquestionably, the test-taking strategies play a substantial role in ensuring satisfactory achievements in English language testing.

Test-taking strategies are commonly utilized in virtually all language testing situations and test forms and formats, encompassing oral test, paper-based test and computerized test (Cohen & Upton, 2007). So far, those students employ to tackle the tests and how the students use such strategies have been extensively studied, mostly with reading strategies as the main research focus (Dodeen, 2015; Phakiti, 2003). Hirano (2009) and Salehi (2011), for example, mentioned in the same manner that, regardless of students' language proficiency, the use of the test-taking strategies positively influenced the reading test performance. These strategies were frequently adopted as compensatory strategies by exploiting prior knowledge, intuition, and preconception to compensate for insufficient knowledge or understanding in what they read, or by resorting to context clues to make sense of the meanings of unfamiliar and unknown words or establish inter-sentential links within and between paragraphs.

In spite of verified merits of the test-taking strategies in enhancing overall performance in reading tests, as noted by Cohen (2006), not all test-takers know well what strategies to use and how to put them into operation to maximize their scores in the actual testing situations. Thanks to these reasons, it comes as no surprise that why some students perform better than their counterparts on the same test. Moreover, Lee (2011) pointed out in his paper that currently a number of language teachers are still not fully aware of their students' incapability to approach the test properly. As a consequence, the teachers seem to inadvertently have overlooked the significance of equipping students with effective tactics to deal with the tests.

Moreover, Singh, Ong, Singh, Maniam and Mohtar (2021) noted that, so far, there is not much research addressing the relationship between students' test-taking strategies and their test scores in Thai context, especially at college level. Consequently, to bridge this gap, this current study aims to investigate the relationship between students' with different proficiency levels test-taking strategies and their reading comprehension test performance. The findings would fulfill the gap in the literature on how university students approach reading comprehension tests, and would make the teachers see the significance of integrating the instruction of the test-taking strategies into the language programs offered by the university.

The questions posed in this research are as follows:

1. Is there a relationship between test-taking strategies use and students' reading comprehension test performance?
2. How do high and low proficiency students differ in their use of test-taking strategies?

Literature Review

In this section, the concept of test-taking strategies, the relationship between the use of the test-taking strategies and reading comprehension test performance as well as the previous research on the test-taking strategies are presented.

Test-Taking Strategies

Over the two decades, many scholars have defined the meanings of test-taking strategies. Broadly speaking, Test-taking strategies refer to the analysis and problem solving approaches test takers employ to answer questions in a testing situation. According to Nikolov (2006), the test-taking strategies are defined as tactics or techniques used by individual test-takers to circumvent difficulty or problems in tests. As Cohen and Upton defined the term (2006), the test-taking strategies are “test-taking processes which the respondents have selected and which they are conscious of” (p.4) used to solve specific test tasks. Nonetheless, there exist at least three convergent meanings of the test-taking strategies arising from the literature, which include: 1) language learner strategies (Cohen & Upton, 2006; Cohen, 2013; Bremmer, 1999), 2) test management strategies (Oxford, 1990; Cohen, 1998), and 3) test wiseness strategies (Allan & MacLennan, 1997; Roger & Harley, 1999; Winke & Lim, 2017).

With reference to language learner strategies, they are defined as the ways students adopt to carry out test tasks by utilizing fundamental language knowledge and skills of writing, reading, speaking, listening as well as lexical, grammatical, and translation knowledge and experiences (Cohen & Upton, 2006; Cohen, 2013). As exemplified by Cohen (2006), within a reading comprehension test, a student might use a technique of word-for-word translation to construct meanings and details out of a written text in order to ultimately arrive at literal and global comprehension. Also, skimming and scanning can be operationalized by a test-taker as a speed reading technique with the aim to get a general overview of the target material, subsequently making him capable of producing a correct response to language test items. Bremmer (1999) addressed these language strategies as ‘a set of integrated skills’ which is a combination of receptive and productive skills.

Regarding test management strategies, some second language acquisition and English language teaching scholars view them as tactical procedures adopted by test-takers by relying on test content-related knowledge, rather than linguistic skills, which may include, but are not limited to time management, reasoning, guessing, error-avoidance, elimination, monitoring, and risk taking (Cohen, 1998). This type of strategies is commonly employed among experienced test-takers, in particular the ones who are accustomed to multiple-choice and fill-in-the-blanks tests (Anderson, 2001). As Peng (2005) remarked, proficient test-takers always review all the questions to find the keywords and match them with similar or the same keywords in the provided text. The selected keywords would serve as clues which are then exploited to get rid of distraction choices, thus enabling the test-takers to focus only on the remaining options. In some cases, if the test time is running out, some students might decide to make a logical guess, instead of a random one, based on their current knowledge to maximize the chances to obtain the correct answer.

With respect to test wiseness strategies, they are conceptualized as the actions to note and take advantage of test forms and formats with no reliance on any subject and world knowledge (Roger & Harley, 1999). Cohen also (2013) defines test wiseness strategies as “using knowledge

of testing formats and other peripheral information to obtain responses – very possibly the correct ones – on language tests without engaging the requisite L2 knowledge and performance ability.” (Cohen, 2013, p. 4). Essentially, such strategies are matters of strategic selection and elimination decision. Allan and MacLennan (1997) explained a certain ways that test wise test-takers approach the test of different patterns. In the case of multiple-choice test, they just glance over the choices and eliminate one of them that make the least sense to them such as ‘none of the above’, ‘all of the above’ or “A and B”. As for open-ended questions, the test-takers might choose to do an easy item or one with the highest mark first before moving on to the rest of the questions. Sometimes tricky or ambiguous questions might be skipped. However, the prudent test-takers would not forget to mark those skipped questions in order for them to come over before the test ends, thus reducing the chances of leaving any questions blank unintentionally. Winke and Lim (2017) stated that these strategies help students to “know things that are unrelated to what is actually being tests” (p. 318) and, significantly, they do not have to be academically knowledgeable to effectively apply the tactics.

It is quite apparent that what is meant by test-taking strategies is subject to the techniques and procedures used by test-takers (Bumbálková, 2021). Even though the definitive meanings of the test-taking strategies vary based upon an individual’s interpretations, they all have beneficial effects, at least to some extent, on the test-takers’ test performance when they are used appropriately.

Test-Taking Strategies and Reading Comprehension Test Performance

As empirically evidenced by some research studies, it was found that test-taking strategies correlate positively with students’ test performance in the reading tests (Huang, 2016; Lee, 2011; Phakiti, 2003). Still, the effectiveness of each strategy variably depends on such factors as individual students’ language proficiency, background knowledge, test type and format, gender, culture, native language or even psychological factors such as anxiety, motivation or attitude towards the tests (Hambleton, Swaminathan & Rogers, 1991). Accordingly, a variety of strategies are employed differently, resulting in different test outcomes.

To ensure the best possible score, Ajideh and Nourdad (2019) suggested that the test candidates use various strategies to respond to a given task in the reading comprehension test. To illustrate this point, the test-takers should keep away from pure guessing at all costs and instead make an educated guess by using their prior knowledge to its fullest, as well as not stick with undue hesitation and spare time for the rest of the test. In a similar vein, Roger and Harley (1999) advised the students to notice the characteristics of the exams they are performing, read the instruction carefully, evaluate the point value of each item in the entire test and manage the allotted time properly. In addition, to narrow down the possible choices, it is recommended that key points and semantic clues be drawn from both questions and different parts of the reading passage in order to make intertextual inferences. Altogether, these strategies will complement each other; therefore, the probability of getting a higher score could be warranted.

Previous Studies on Test-Taking Strategies

Over the past three decades have seen a growing body of research on test-taking strategies. The review of the previous studies revealed that the majority of the research were carried out to find out the relationship between test-takers’ test-taking strategies used and their

Whereas some research in this area employed a qualitative methodology such as questionnaires, interviews, self-reports and think-aloud protocols (Rubb, Ferne & Choi, 2006; Yang, 2004), other studies employed a mixed-method approach with a combination of pre- and post-comprehension tests with such instruments as open-ended and close-ended questionnaires and recall interviews (Ajideh & Nourdad, 2019; Lee, 2011; Razaei, 2005; Yien, 2001). The participants in almost all of the studies were the college students of diverse language background such as Iranian, Chinese, Korean, American, and with different language proficiency levels. Razaei (2005) and Yien (2001) conducted the quantitative studies on test-takers' used of test-taking strategies and their overall test performance. The results demonstrated that there was a positive correlation between test-takers' use of test-taking strategies and their overall test performance. Nevertheless, there were other research studies that showed the contrast results, which found no significance difference in high and low proficiency test-takers' test-taking strategies use and their test scores (Lee, 2011; Tavakoli & Samian, 2014).

Rubb et al. (2006) and Yang (2004) conducted qualitative studies to investigate individual students' characteristics of their use of test-taking strategies. The results showed that the use of test-taking strategies varied according to individual students' characteristics. Test management and test wiseness strategies were found to be the most frequently used strategies among students (Rubb et al., 2006; Yang, 2004). The examples of commonly used strategies included underlying keywords in the questions, eliminating distraction choices, retrieving information from long-term memory and managing the test time based on test formats. In addition, Singh et al. (2021) investigated weak students' test-taking strategies use in Malaysia. The results provided insight into weak students' use of test-taking strategies. They tended to employ a compensation strategy by mean of which guessing answers.

The previous studies on test-taking strategies in Thailand were found be similar to those done in international setting in terms of research focus and research instruments. Phakiti (2003) and Oranpattanachai (2010) conducted similar studies on students' test-taking strategies. They found that the use of students' test-taking strategies was beneficial on their test scores. The strategies helped Thai students of different language levels respond to the test tasks more wisely and confidently. The researchers indicated that a wider array of strategies were utilized by high achieving students more frequently than lower achieving ones; this was one of the main reasons why high achievers always outperformed low achievers in the tests. Vattanapath and Jaiprayoon (1999) and Waiprakhon and Jaturapitakkul (2018) pointed out in their research that the ways each strategy was employed were a good reflection of students' behaviors employed for the sake of getting the highest score. Although students of different proficiency levels employed the same strategies, more advanced students were found to be better utilizing the test-taking strategies than their friends.

To date, in Thai educational context, since there has been little research reported on the connection between test-taking strategies and test performance, the aim of the present research is to explore further such relation among high and low proficiency students in order to highlight and verify the benefits of the test-taking strategies.

Methods

Since this research aims to explore university students' test-taking strategies use when

dealing with the reading comprehension test, it requires both quantitative and qualitative data to validate the findings. Therefore, a mixed methods approach was employed as it allows for data triangulation, which would lead to greater data accountability and comprehensiveness.

Participants

The participants of this research are 68 English I students who enrolled in an English I course offered by Institute for English Language Education (IELE) at an international university as the required course in the academic year 1/2020. The sample, convenience sampling, was randomly assigned to the researcher by Office of the University Registrar. Since the course is a core course for all freshmen, the participants in this study are students from different disciplines and faculties.

Instruments

There were two research instruments employed in this current study: reading comprehension proficiency test and test-taking strategies questionnaire.

Reading comprehension proficiency test consisted of 30 multiple choice items, testing reading proficiency level of the students. In order to assess the reliability of the reading proficiency test results, Cronbach's Alpha test was conducted in SPSS Statistics program with all of the test items. The result showed the relative consistency of the participants' performance on all test items with the obtained Cronbach's Alpha total of .75 and p-value <0.05.

The test-taking strategies questionnaire was developed from the one used in the study by Cohen and Upton (2007). The participants were asked to go through a 5-point Likert scale on test-taking strategies with 1 for never, 2 for seldom, 3 for sometimes, 4 for usually, and 5 for always. The questionnaire consisted of 11 statements on language learning strategies, 10 statements on test management strategies, and 10 statements on test wiseness strategies, with open-ended slot for students to freely express their comments on their use and experience of each strategy at the end of the questionnaire.

Data Collecting Procedures

Data were collected in two main phases. In the first phase, the participants were asked to take 30 multiple-choice questions reading proficiency test to measure their reading proficiency. The participants were grouped according to their reading comprehension proficiency test scores. After taking reading comprehension test, students were put into high and low proficiency groups. The students who gained scores 25.5 or above were assigned to high proficiency group, and those who gained 12 or below were assigned to low proficiency group. The number of students in each group is presented in Table one.

Table 1. *Distribution of test scores in different levels of proficiency*

Level of Proficiency	Range of Scores	Frequency
High	Above 25.5	10
Low	Below 12	15
Total		25

In the second phase, after taking reading comprehension test, the participants were given a 30 items test-taking strategy questionnaire to find out about their test-taking strategies used in the reading comprehension test which encompassed three types of strategies: 1) language learning

strategies, 2) test management strategies and 3) test wiseness strategies.

Data Analysis

The data collected from reading comprehension proficiency test and questionnaires were analyzed by SPSS program which was used to calculate the frequency, arithmetic means (\bar{x}), and standard deviation (S.D.) of each item. The self-administered 5-point Likert scale questionnaires were analyzed using the descriptive method with Pearson product-moment correlation. The independent-sample t-test was used to compare the data collecting from high and low proficiency groups students.

Results

Question 1: Is there a relationship between test-taking strategy use and students' reading comprehension test performance?

The analysis of Pearson product-moment correlation showed that there was a significant relationship between students' test-taking strategies and their reading test performance. ($r = .44$, $p = .00$). As presented in Table two, the mean score of students' test-taking strategies use was 3.12 (S.D. = .59), whereas the mean score of students' reading comprehension test was 16.41 (S.D. = 5.14).

Table 2. Overall correlations between test-taking strategies and students' test performance

	\bar{x}	S.D.	r	Sig.
Test-taking strategies	3.12	.59		
Students' test performance	16.41	5.14	.44	0.00*

$p \leq 0.01$ (2-tailed) $p \leq 0.05$ (2-tailed)

All three aspects of test-taking strategies were statistically correlated with students' reading comprehension test performance as presented in Table three.

Table 3. Overall correlation scores of three aspects of test-taking strategies and students' test performance

	LLS	TM	TW	Overall
Language learner strategies	1	.77**	.68**	.37**
Test management strategies	.77**	1	.68**	.57**
Test wiseness strategies	.68**	.68**	1	.23**
Overall scores	.37**	.57**	.23**	1

$p \leq 0.01$ (2-tailed) $p \leq 0.05$ (2-tailed)

As Table three demonstrated, test management strategies showed a strongest relationship with students' test scores ($r = .57$) as they were most employed in testing situation. This showed that the more frequently a student employed test management strategies, the better her/she performed on the reading comprehension test. Moreover, language learner strategies also gained high relationship with students' test scores ($r = .37$). Even though the correlation between students' reading comprehension test performance and test wiseness strategies was not high, test wiseness strategies were still correlated with students' test scores at least to some extent ($r = .23$).

Question 2: How do high and low proficiency students differ in their types and frequencies of test-taking strategies used?

The independent-samples t-tests were carried out to compare the students' mean scores between high and low proficiency groups by analyzing them in relation to individual strategies including language learner, test management, and test wiseness strategies.

The overall mean scores are compared and analyzed using independent-sample t-test. The results are presented in Table four.

Table 4. Comparison of mean scores under language learner strategies used by high and low proficiency students

Group	n	\bar{x}	S.D.	t	Sig. (2-tailed)
High proficiency students	10	3.34	0.19		
Low proficiency students	15	2.92	0.26	4.17	0.00*

$p \leq 0.01$ (2-tailed) $p \leq 0.05$ (2-tailed)

As shown in Table five, the compared overall mean scores are analyzed using independent-sample t-test. The overall result showed significant differences between high ($\bar{x} = 3.34$) and low ($\bar{x} = 2.92$) proficiency students using the language learning strategies. This indicates that high proficiency students employed language learner strategies more than low proficiency students while taking reading comprehension test.

An analysis of types and frequencies of language learner strategies employed by high and low proficiency students are presented in Table five.

Table 5. Frequency of language learner strategies used by high and low proficiency students

Language Learner Strategies	High (n=10)		Low (n=15)		t	P
	\bar{x}	S.D.	\bar{x}	S.D.		
1 use key words to find the main idea	3.26	0.63	3.26	0.70	-0.24	0.81
2 run through the entire passage quickly to find the main idea	3.4	0.51	3.4	0.63	0	1
3 identify specific information by reading the passage slowly and carefully	3.4	0.69	3.33	0.72	0.22	0.82
4 interpret the meanings of unfamiliar words by using hints	2.9	0.73	2.86	0.63	0.12	0.90
5 reread the passage to make sure the main idea is understood correctly	4.3	0.67	2.66	0.72	5.67	0.00*
6 ask myself about the overall meaning of the passage	4.1	0.73	2.93	0.70	3.98	0.00*
7 determine meaning of unfamiliar words by using sentence patterns/ grammatical features	3.4	0.51	3.33	0.89	0.21	0.83
8 review key ideas by taking notes	2.2	0.63	2.06	1.09	0.34	0.73
9 examine roots of unknown words to determine their meanings	2.5	0.70	2.46	0.83	0.10	0.91
10 use background knowledge to determine meanings of unknown words	4	0.81	2.93	0.88	3.04	0.00*

*The mean difference is significant at the 0.05 level.

Data from Table five demonstrated that there was a somewhat distinct resemblance in terms of types and frequencies of test-taking strategies used by high and low proficiency students.

Although the top 3 test-taking strategies employed most frequently by high proficiency students were “reread the passage to make sure the main idea is understood correctly” ($\bar{x} = 4.3$), “ask myself about the overall meaning of the passage” ($\bar{x} = 4.1$), and “use background knowledge to determine meanings of unknown words” ($\bar{x} = 4$), the two groups of students were found to use the same strategies with nearly the same frequency which included “running through the entire passage quickly to find the main idea” ($\bar{x} = 3.4$ [High], $\bar{x} = 3.4$ [Low]), “identify specific information by reading the passage slowly and carefully” ($\bar{x} = 3.4$ [High], $\bar{x} = 3.33$ [Low]), “determine meanings of unfamiliar words by using sentence patterns/ grammatical features” ($\bar{x} = 3.4$ [High], $\bar{x} = 3.33$ [Low]) and “use key words to find the main idea” ($\bar{x} = 3.26$ [High], $\bar{x} = 3.26$ [Low]). From the findings, it can be seen that both groups of students preferred to use a variety of strategies in finding and making sense of the main idea of the reading passage as well as in decoding the meanings of unfamiliar and unknown words.

Likewise, qualitative data obtained from the open-ended questions in the questionnaires reflected pretty much corresponding ideas. According to the statements made by highly proficient students, they always applied the techniques in finding the main idea by reading the passage in its entirety. They mentioned that the main idea was normally not clearly stated. The beginning of the passage or topic sentences at times just explained the topic or subject to be discussed in detail later, and the concluding sentences or paragraph merely provided a conclusive summary of the information from the overall passage. On the same token, students who were low proficient students, explained that from time to time the main idea was implied or inferred ideas. Accordingly, they had to take specific words and supporting details into account which covered identifying facts, reasons, hints, and key concepts from every single sentence or paragraph, and then logically piece them together to indicate the central idea of the passage.

Moreover, the responses to the open-ended questions in the questionnaire revealed that several participating students utilized background and grammatical knowledge in facilitating the interpretation of unusual vocabulary. For instance, some students stated that, to puzzle out both direct and implied meaning of a word they ran across, especially content words, they exploited the context surrounding those unknown words as well as their positions and structural functions in paragraphs or sentences. Eventually, all these hints would lead them to the most equivalent and comparable meanings of the target words.

Table 6. Comparison of mean scores under test management strategies used by high and low proficiency students

Group	n	\bar{x}	S.D.	t	Sig. (2-tailed)
High proficiency students	10	3.68	0.22		
Low proficiency students	15	2.72	0.30	8.47	0.00*

As shown in Table six, there was a significant difference between high ($\bar{x} = 3.68$) and low ($\bar{x} = 2.72$) proficiency students when using the test management strategies. It was obvious that highly proficient students employed test management strategies more than low proficient students did when taking the test.

An analysis of types and frequencies of test management strategies employed by high and low proficiency students are presented in Table seven.

Table 7. Frequency of test management strategies used by high and low proficiency students

Test Management Strategies	High (n=10)		Low (n=15)		t	P
	\bar{x}	S.D.	\bar{x}	S.D.		
11 set a purpose for the reading passage	2.3	0.67	2.26	0.79	0.10	0.91
12 reread questions for greater clarification	4.5	0.52	2.86	1.06	4.49	0.00*
13 read the option answers before going back to the passage	3	0.94	2.93	0.88	0.17	0.85
14 reread questions and read the passage to look for clues	3.1	0.87	3.1	0.91	-0.09	0.92
15 make a prediction or formulate my own answer while reading the passage	4.6	0.51	2.53	0.91	6.45	0.00*
16 consider answer options by concentrating on familiar options	4.5	0.52	2.73	0.70	6.75	0.00*
17 eliminate unreasonable/ unrelated option answers to choose the correct choice	2.1	0.73	2	0.84	0.30	0.76
18 eliminate similar/overlapping option answers to choose the correct choice	3.8	1.03	3.6	0.98	0.48	0.63
19 consider unrelated vocabulary to discard plausible distractors	4.1	0.70	2.93	0.88	3.44	0.00*
20 consider related vocabulary and sentences to select the correct choice	4.8	0.42	2.26	0.70	10.18	0.00*

*The mean difference is significant at the 0.05 level.

As can be seen from Table seven, test management strategies used by high and low proficiency students were found to be different both in terms of sub-techniques and frequency of each sub-techniques. Whereas the most frequently used test management strategies for highly proficient students were “consider related vocabulary and sentences to select the correct choice” ($\bar{x} = 4.8$), “make a prediction or formulate my own answer while reading the passage” ($\bar{x} = 4.6$) “consider answer options by concentrating on familiar options” ($\bar{x} = 4.5$), and “reread questions for greater clarification” ($\bar{x} = 4.5$), low proficient students were found to prefer to use “eliminate similar/overlapping option answers to choose the correct choice” ($\bar{x} = 3.6$), “reread questions and read the passage to look for clues” ($\bar{x} = 3.1$), “consider options before going back to the passage” ($\bar{x} = 2.93$), and “consider unrelated vocabulary to discard plausible distractors” ($\bar{x} = 2.93$).

Still, interestingly, even though the results showed that the sub-techniques in managing test were found to be different between the two groups of participating students, both groups quite obviously valued the connection between the associated ideas in the options and the ones in the reading passage, with a major purpose to predict and find the most likely or the correct answer to the question. As some students explained in the slots provided in the survey, they overcame the challenges in the long and complex reading tests by underlining or marking such key words as facts, names, dates or figures in the option answers and matched them with similar words or synonyms in the passage, as they strongly believed that such technique would help them efficiently manage time and guided them in the right direction in locating the key ideas, thus not having to mulling over the distractors or overlapping options in multiple-choice items.

Apart from considering the options, both high and low proficient students were also found to utilize the technique of rereading questions to indicate the clues and help them solidify their understanding of the author’s purpose. Students similarly said that by reading the questions twice

or more did help them approach the reading text more properly. That is to say, they could build a framework in mind and had a clear sense of what to look for or what parts needed to be critically interpreted in the reading passage. Consequently, there would be an increased tendency to reach the right answer to the questions amid an information dense target text.

An analysis of test taking strategies questionnaire scores between high and low proficiency students and test wiseness strategies is presented in Table eight.

Table 8. *Comparison of mean scores under test wiseness strategies used by high and low proficiency students*

Group	n	\bar{x}	S.D.	t	Sig. (2-tailed)
High proficiency students	10	3.19	0.25		
Low proficiency students	15	3.18	0.27	0.09	0.92

As demonstrated in Table eight, the result showed no significant difference between high ($\bar{x} = 3.19$) and low ($\bar{x} = 3.18$) proficiency students when it comes to using the test wiseness strategies. The result is in line with the correlation results that indicated a significant relationship between test-taking strategies and reading comprehension test performance.

An analysis of types and frequencies of test wiseness strategies employed by high and low proficiency students is presented in Table nine.

Table 9. *Frequency of test wiseness strategies used by high and low proficiency students*

Test Wiseness Strategies	High (n=10)		Low (n=15)		t	P
	\bar{x}	S.D.	\bar{x}	S.D.		
	21 read instruction carefully	4.2	0.91	4.06		
22 start with easy questions	2.3	0.67	2.46	0.91	-0.49	0.62
23 allocate specific time to each question according to difficulty/length	2.3	0.67	2.26	1.27	0.07	0.94
24 underline key words in questions	2.1	0.56	1.93	0.88	0.52	0.60
25 answer questions in chronological order	3.8	0.91	3.8	1.01	0	1
26 answer questions without knowing the exact answer	4.4	0.51	4.6	0.50	-0.95	0.34
27 use clues in other items to answer item under consideration	2.2	0.61	2.33	0.66	-0.52	0.60
28 select the item based on the overlapping words/phrases from the passage	3	0.66	4.26	0.45	-0.56	0.00*
29 reread all questions to make sure they are understood correctly	4	0.94	2.66	0.72	4	0.00*
30 avoid last minute change	3.6	1.07	3.4	1.05	0.46	0.64

*The mean difference is significant at the 0.05 level

From Table nine, it was found that some test wiseness strategies were preferably used with similar high frequencies by high and low proficiency students, including “answer questions without knowing the exact answer” ($\bar{x} = 4.4$ [High], $\bar{x} = 4.6$ [Low]), “read instruction carefully” ($\bar{x} = 4.2$ [High], $\bar{x} = 4.06$ [Low]), “answer questions in a chronological order” ($\bar{x} = 3.8$ [High], $\bar{x} = 3.8$ [Low]) and “avoid last minute change” ($\bar{x} = 3.6$ [High], $\bar{x} = 3.4$ [Low]). Statements made by several students illustrated how both group of students approached the test wisely.

As remarked by students in the questionnaire, every time before starting reading the passage, they always read the instruction accurately because it not only told them what to do

such as ‘put an “X” in the square’ or ‘blacken the circle with the pencil’, but it also warned them of what were not allowed to do in the test and during the test period such as ‘do not make unnecessary marks on the answer sheet’, ‘mark only ONE answer for each question’, ‘stay in your seat until you receive permission from the proctor’ or ‘raise your hand, when you are ready to submit your test’. Students also said that many of their friends sometimes took the instruction lightly, as a consequence, they felt regret making mistakes due to their heedlessness and negligence.

Moreover, when it came to answering the questions, students responded to the test questions without knowing the exact answers. Yet, it was not an absolute random guessing as one might suppose. One student, for example, stated after crossing off the answers I knew were definitely wrong on the first pass and eliminating one or two likely wrong options, I often took a careful look at the remaining choices and then made a guess as I personally thought that it would more or less give me a better chance of guessing correctly. Also, it was found that a handful of students preferred to make an educated guess over a random one. According to the statements made by students, once they read the reading text and narrowed or eliminated some choices, they would make a connection between their existing knowledge and the clues available in the text and drew inferences based on their own reasoning before making an informed guess.

Furthermore, the qualitative data revealed that some students answered the questions according to their orders of appearance. As evidenced by students’ remarks, they said that by answering the tests in chronological order, there was a significantly less chances of unintentionally leaving the questions unanswered. However, in case of the questions asking about main idea, it was impossible to go in chronological order because this type of question required them to read the whole reading passage to grasp the key idea. Accordingly, they decided to mark the unaddressed choices in order for them to come back again. In addition, the students were found manage the test time by avoiding changing the answers in the last minute. At times participating students reported that they found themselves hesitated between the two choices, but they always decided to move on in avoidance of getting trapped or ending up stuck halfway through the test. As one student mentioned, when I tried to avoid changing the answer while the test time was running out, as “I might take away time from a few other unsolved questions and paid the price in lost time.”

Discussion

Question 1: Is There a Relationship between Test-Taking Strategy Use and Students’ Reading Comprehension Test Performance?

The findings showed that all three aspects of test-taking strategy were significantly correlated with students’ test performance, with test management strategies being the most frequently used strategies. Moreover, it was found that the more frequently a student adopted the test-taking strategies, the better her/she performed on the reading comprehension test. The results of the present study were found to be similar to those of previous research by Anderson, Bachman, Perkin, & Cohen (1991), Phakiti (2003) and Lee (2011). They reported, in quite the same way, that the test management strategies can facilitate test takers to perform better on reading comprehension test. Advanced test-takers, in particular, deliberately adopted the strategies to manage the reading tests due to their intimate acquaintance with the tests and they knew how their test would be scored. As a consequence, they were well capable of allocating a

proper amount of time to answer each test item. For example, while and after reading a particular reading text, high proficiency students would always predict and formulate their own answers about the key points in their mind, and read the questions and answer choices carefully and thoroughly before making a final decision on the correct answer (Guo, Kim, Yang, and Liu, 2016). Likewise, some of highly proficient students in Anderson et al. (1991) and Lee (2011) mentioned that they used keyword strategy to identify key ideas in the reading text and ignored irrelevant information that was not covered by the tests. After reviewing the questions, experienced students knew well what portions of the text were worth reading, hence being able to decide how to go about responding to the questions. As suggested by Vattanapath and Jaiprayoon (1999), when students know early what to do with the tests, it can also decrease test anxiety that might be occur while taking the test as well as enhance students' motivation and attitudes toward test.

Question 2: How Do High and Low Proficiency Students Differ in Their Types and Frequencies of Test-Taking Strategies Used?

The results from the present study demonstrated that high proficiency students somewhat more frequently used test-taking strategies than low proficiency students. However, both group of participating students were found to similarly employ a wide range of techniques in tackling the reading test, with the most preferable among them being finding the main idea by identifying key words or similar words or phrases in the reading passage as well as in the test items. In addition to the main idea, the students were also trying to look for the clues in the test items and questions. In the event that the students did not fully understand all of the ideas in the passage, they would try to use their background knowledge to make sense of the concepts and unfamiliar words, and made an informed guessing after eliminating the likely wrong items. The finding is accordance with what were found in Nemati (2016) and Ghafournia's (2013) study. The data from think-aloud verbal reports revealed that even if high achievers employed a wider range of test-taking strategies than lower achievers, identifying keywords in the option items and in reading passage was found to be the marked preference for both groups of students. Many students in Nemati's study remarked that with their considerable test-taking experiences and knowledge, especially with standardized tests, the strategy of highlighting keywords was normally employed intuitively so as to look for clue words in test questions to perform some type of inferencing and make most efficient use of context clues to figure out the meanings of unusual words.

Moreover, the findings from the current study can also be supported theoretically by the notion of test-taking strategies proposed by Cohen (1998). He pointed out that there are several factors that affect the use of test-taking strategies such as the intellectual and cognitive characteristics of particular students, lexico-grammatical and sociolinguistic complexity of the test content as well as such affective factors as self-confidence, anxiety, and motivation or an interaction of all these factors. He added that the test-taking strategies are a matter of interrelated set of brain processes which can be automatically triggered once the test-takers expose to the tests. Once activated, background knowledge from working memory and acquired linguistic capacities can work in harmony for the to maximize the possibility of achieving the best test outcomes.

Conclusion

This study examines the relationship between students' test-taking strategies and their reading comprehension test performance. As evidenced by the findings, test-taking strategies were found to have a significantly positive effect, at least to a certain extent, on reading comprehension test performance regardless of students' language proficiency levels. The most frequently employed test-taking strategy among high and low proficiency students was finding key words by reading the whole reading passage, the questions as well as in the test items with an aim to identify the main idea, key concepts and facts. Also, the two groups of participating students preferred to match similar words or ideas in the items in multiple choices and those in the reading passage and make a connection between them, which was highly likely to lead them to the correct answer to the question. Although sometimes the students did not really know the exact answer, they would try make an educated guessing by making use of their background knowledge or eliminate the likely wrong answer, and ultimately select the best answer from the remaining ones. Based upon the research results, it can be concluded that the a variety of test-taking strategies were proved to be actually used by the students of all levels and could be considered as useful and practical survival tools that can be used, both deliberately and instinctively, to tackle the challenges or the problems in a language test. It would be logical to say that the more such strategies are employed, the greater success in taking the test the students will achieve.

Recommendation for Further Studies

As noted by Lee (2011), a number of students are still not able to employ the test-taking strategies effectively and appropriately. Moreover, it seems that even if the students are using the same test-taking strategies, they might not equally benefit from using such strategies. Hirano (2009) suggested that preparatory courses should be offered to students to prepare them with test-taking strategies knowledge. Students should be provided the adequate opportunity and practice with different types of tests. This is because students would not only learn how to use test-taking strategies effectively in a test situation, but it is possible that the students might learn to create and devise a new repertoire of personalized tactics that suit them best. As a result, the students could be able to tackle the tests more wisely and confidently.

In order to gain deeper and more insightful understandings, future studies are recommended to be done in experimental studies in other different contexts and with populations of different backgrounds, ages, study levels, and other types of tests such as writing and listening tests. The findings derived from further research might be used to find out more the extent to which test-taking strategies could contribute to language testing and learning.

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