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Differences in the Use of Multiple-choice Test-taking Strategies by Iranian EFL Learners Regarding Reading Comprehension Ability

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Abstract

The study investigated differences in the use of multiple-choice test-taking strategies by Iranian EFL learners regarding reading comprehension ability. Reading is the most important academic language skill that receives the particular focus in second or foreign language teaching; tests are also regularly applied to assess academic performance. This paper sought to investigate differences in the use of multiple-choice test-taking strategies by Iranian EFL learners regarding reading comprehension ability. The participants comprised 122 EFL learners, 61 females and 61 males, who answered a reading comprehension test while they were answering a test-taking strategy questionnaire. A number of one-way chi-square analyses were used to analyze the data. The findings manifested that there was a statistically significant difference between participants in the use of different types of test-taking strategies in answering multiple-choice reading comprehension test. The results of this study have pedagogical implications for teaching test-taking strategies to low-proficiency EFL learners.

Keywords: Reading Comprehension, Test-Taking Strategies, Iranian EFL Learners, Multiple-Choice Test Items, and Strategies

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Introduction

Reading comprehension in a foreign language is a complex process with many underlying cognitive components. Many researchers have tried to explain reading comprehension in terms of taxonomies of sub-skills (Munby, 1978; Alderson & Lukmani, 1989; Lumley, 1993; Hughes, 2003; Jang, 2009). However, the nature of these sub-skills is not yet known. We still do not know "whether separable comprehension sub-skills exist, and what such sub-skills might consist of and how they might be classified" (Alderson, 2000, p. 10).

Reading in a foreign language has been one of the primary foci of second language acquisition for researchers in recent years. Zhou (2008) states that the acquisition of second language reading skills is a priority for many language learners around the world. Many EFL students rarely experience a situation where they have to speak English on a daily basis, but they might need to read in English quite often in order to benefit from various pieces of information, most of which is recorded in English (Eskey, 1996). Moreover, reading is fundamental for all academic disciplines (Lei, Rhinehart, Howard, & Cho, 2010). Therefore, reading skills must be promoted in order for students to be able to deal with more sophisticated texts and tasks in an efficient way (Ur, 1996).

Tests have become a prevailing tool for decision-making in our competitive society and individuals are evaluated according to their achievements on them. Language test results, then, may play a considerable role in the test-takers' lives, helping to determine whether they are admitted to their academic program of choice or are offered the job of their dreams (Al-Fraidan & Al-Khalaf, 2012). As a result, how to perform better on tests has become a major concern for students and teachers. Tests require learners to read directions, instructions, and questions, work independently, and write correct responses (Amer, 1993). Mastery of these skills is vital for performing well on tests. "In analysing test results, most teachers focus on students' scores. However, it is a fact that students employ certain skills, called 'test-taking strategies', when taking tests to improve their performance and receive higher scores" (Al-Fraidan & Al-Khalaf, 2012, p.80). According to Cohen (1998), since the late 1970s, interest has slowly grown in approaching second language testing from the point of view of the strategies used by test-takers while taking tests. He claims that these strategies jeopardise the validity and reliability of tests. This in turn influences the process of decision-making, which is reliant upon testing because test validity requires attention to how the test-takers arrive at their answers. Evidently, when taking tests, a person is tested on two things: his or her knowledge about the subject and his or her knowledge about taking a test. Test-taking strategies address the latter.

Allan (1992) concluded from the introspections that certain categories of questions engage a narrow range of strategies**:** a) identifying the main idea and b) identifying a supporting idea. On the other hand, two different categories of

questions engage a wider range of reading strategies: a) ability to draw an inference and b) ability to use supporting information presented in different parts of the passage. He states that "test designers cannot make a strong case that their questions are likely to engage predicted strategies in their readers or that using the predicted strategies will normally lead to the correct answer" (p. 331).

For the purpose of the present study, a multiple-choice test format was selected from the variety of available test formats, specifically because it is always a controversial format. On the other hand, multiple-choice is considered to be an objective format which requires intellectual discrimination skills, a versatile test capable of probing a variety of areas and different types of cognitive activities such as acquisition of knowledge, understanding, application, analysis, and evaluation (Marshall & Hales 1971; Green, 1975).

Review of Literature and Empirical Background

Various L2 researchers have attempted to identify strategies used in language-testing situations. By and large, their collective findings have suggested that test-takers indeed use strategies to perform the given test and have as such brought to light the integral role of test-taking strategies in test completion (e.g., Cohen & Upton, 2007; Yang & Plakans, 2012). Further, differential strategy use is manifested across test-takers with dissimilar language proficiency (e.g., Phakiti, 2003; Nikolov, 2006). Mobilization of test-taking strategies has been found to influence test performance (e.g., Yoshizawa, 2002; Song, 2005).

Test-taking strategies originated from the concept of "test-wiseness" which is defined as "one's capacity for using test characteristics and formats and/or test-taking situations to raise test scores" (Millman, Bishop, & Ebel, 1965; cited in Ritter & Idol-Maestas, 1986, p. 50). Meanwhile, Jimenez, Garcia, and Pearson (1996) referred to test-taking strategies as operations or steps used by test-takers to facilitate the retrieval of information and classified them into four groups—reader-initiated strategies, text-initiated strategies, bilingual strategies and interactive strategies.

As Bachman (1990) pointed out, "A ... critical limitation to correlational and experimental approaches to construct validation ... is that these examine only the products of the test taking process, the test scores, and provide no means for investigating the processes of test taking themselves" (p. 269). Findings from test-taking strategy research on how learners arrive at their test responses in different contexts have increasingly been seen to provide insights for test validation, complementing those obtained by correlational and experimental means. Such research has been used in construct validation studies, providing a new source of data for convergent validation of the construct being assessed. It has also provided insight into how given test methods, formats, and item types may affect learner responses, and how these may interact with proficiency and other contextual factors.

For example, the relationship among test-taking strategies, item content, and item performance was explored in a construct validity study of a reading test used in a doctoral study on reading strategies (Anderson, 1989, 1991).

Khowaja and Salim (2013) carried out test-taking strategy research related to reading comprehension for children with autism. Their paper presents a systematic review of relevant published studies on reading comprehension for children with autism, focusing on vocabulary instruction and text comprehension instruction from 2000 to 2011. This review attempts to address three specific research questions: strategies of vocabulary instruction and text comprehension instruction used, computer-based intervention (CBI) used or developed during study, and the effectiveness of using CBI for teaching children with autism. There were five strategies of vocabulary instruction and seven strategies of text comprehension instruction. Results indicated that two strategies of vocabulary instruction, multimedia methods, and explicit instruction were found to be more commonly used than the other three. Question answering strategy of text comprehension instruction was discovered to be used more often than the other six. Results also indicated that children with autism could benefit from the strategies of reading comprehension and that the use of CBI as a mode of instruction for reading comprehension improved the learning of children. This is clearly evident judging from the performance of children between pre-tests and post-tests of studies in which CBI was used. However, due to heterogeneity of participants, this is not always the case; a few studies reported no improvement in the learning of children with autism.

Lennon (1962) argues that it is only possible to reliably measure four sub-skills in reading ability: word knowledge, comprehension of explicitly stated meaning, comprehension of implicit / inferential meaning, and appreciation. However, Carroll's (1993) factor analytic studies of cognitive tests identified four factors in reading: (general) reading comprehension, special reading comprehension, reading decoding, and reading speed. Hudson (1996) suggested that reading comprehension involves processing skills such as local textual comprehension, global textual comprehension, and inference-making. In much the same vein, Weir and Porter (1996) conceptualized reading comprehension as having four categories of processes and skills: (1) local careful reading, (2) global careful reading, (3) local expeditious reading, and (4) global expeditious reading.

The research question addressed in this study is:

Do Iranian EFL learners use different types of test-taking strategies in answering multiple-choice reading comprehension items differently?

Method

To explore the research question, the participants, instruments, and procedures for conducting the research are discussed.

Participants

The participants in this study were 120 male and female EFL students from four senior High Schools in Zarand, a city in Iran. They were fourth-graders, aged 17 or 18.

Instruments

In the present study, two types of instruments were administered: (a) a test-taking strategies use questionnaire, and (b) a multiple-choice reading comprehension test.

Test-Taking Strategies Use Questionnaire

In the present study, the researchers designed the test-taking strategies use questionnaire. The questionnaire was used to identify the participants' test-taking strategies use in reading when they took a multiple-choice reading comprehension test. It should be noted that prior to the formal administration, the questionnaire and the reading comprehension test (see below) were piloted with different but representative participants. On the basis of the results, some items were deleted or revised and some problems were removed. The final test-taking strategies use questionnaire was comprised of 14 strategy items or statements. It originally consisted of fifteen strategy items, but after validation, fourteen strategy items were retained, with a Cronbach's alpha of .873. In order to avoid participants' English proficiency encroaching upon their filling in the questionnaire, it was translated into Persian, the participants' first language. Therefore, the participants received the questionnaire in Persian.

Multiple-Choice Reading Comprehension Test

In the present study, a reading comprehension test in a multiple-choice format was used to assess the fourth-graders' test-taking strategies use. Four reading passages with different topics and length were given to the participants. The passages and the twenty test items were selected from *Facts & Figures: Reading and Vocabulary Development* (Ackert & Lee, 2004).

In addition, the reading texts were piloted and an item analysis was carried out to drop the inappropriate test items. The internal reliability of the whole test was quite high ($\alpha = .808$).

Procedures

The participants sat the reading test and then filled out the strategies use questionnaire first. Forty minutes were allowed for the reading test and filling out the questionnaire. During their doing on the reading test, the participants received the strategies use questionnaire and were required to fill out the questionnaire after answering each single reading multiple-choice item. The participants were asked to recall their strategy use and respond to each strategy item carefully and honestly.

Data Analysis

To probe the research questions, descriptive and inferential statistics were calculated using the 24th version of SPSS software. Significance of the differences between the uses of different reading strategies was determined by the use of chi square tests. A significance level of 0.05 was set for confirming or rejecting the null hypotheses.

Results and discussion

To test the null hypothesis, a chi-square test ($\square^2$) was used. This test is used when you wish to explore the relationship between two categorical variables. In Table 4.1 below, the expected and observed frequencies are given. Here the expected frequency was 174.2 for all the strategies, while the observed frequencies from the present data file were different and were 2439 in total.

Table 4.1. Observed and Expected Frequencies of Test-Taking Strategies Questionnaire Used by the Participants

Strategy	Observed N	Expected N	Residual
$A_{(1)}$	187	174.2	12.8
$B_{(2)}$	392	174.2	217.8
$C_{(3)}$	443	174.2	268.8
$D_{(4)}$	259	174.2	84.8
$E_{(5)}$	76	174.2	-98.2
$F_{(6)}$	282	174.2	107.8
$G_{(7)}$	215	174.2	40.8
$H_{(8)}$	55	174.2	-119.2
$I_{(9)}$	107	174.2	-67.2
$J_{(10)}$	147	174.2	-27.2
$K_{(11)}$	53	174.2	-121.2
$L_{(12)}$	95	174.2	-79.2
$M_{(13)}$	44	174.2	-130.2
$N_{(14)}$	84	174.2	-90.2
Total	2439		

The chi-square test results are presented in Table 4.2 below, which compares the expected and the observed values. In reporting the results, we need to report the chi-square value, the degree of freedom (shown as *df* in the output) and the *P* value (shown as Asymp. Sig).

Table 4.2. Chi-square of Test-Taking Strategies Questionnaire

Test Statistics	
	Strategy
Chi-Square	1236.916[a]
df	13
Asymp. Sig.	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 174.2.	

The chi-square test was conducted to find out whether there was a statistically significant difference between Iranian EFL learners in the use of different types of test-taking strategies in answering multiple-choice reading comprehension items. The results show that there is a statistically significant difference between the strategies used by the participants, chi-square (13, n = 2439) = 1236.916, p = .000 < .05, effect size = 0.65.

The results of this study corroborates the findings of earlier studies in this area. For example, Lee (2011), in his study, "Second language reading topic familiarity and test score: test-taking strategies for multiple-choice comprehension questions", carried out an Analysis of Variance (ANOVA) to determine if there were significant differences among the group mean scores based on the frequency of strategy category use and topic familiarity. The results showed that the types of test-taking strategies adopted by the Chinese-speaking graduate students remained similar when they read passages with familiar versus unfamiliar topics. However, the participants all reported feeling more relief and more confidence when the reading passages were related to their background knowledge.

Furthermore, the limitation of the present study may restrict the generalizability of the findings. The number of participants were limited to 122 male and female EFL learners of 4 senior High Schools in Zarand, so the results of this study may not be generalizable to all high schools seniors, and also the results may not be accurate, since some participants might not have completed the questionnaire so honestly as they could. Therefore, the results are true to the extent that the

participants gave accurate responses to the items in the questionnaire. Based on these limitations, more studies are needed to make the results more generalizable.

Conclusion

It seems that test-taking strategies are important in an educational system, and especially in high-stakes tests. Thus, it can be concluded that integrating such strategies in teaching curriculum as to be instructed on the regular and disciplined basis could be profitable for the students. In addition, teachers need to provide the learners appropriate situations in order to learn such strategies and try to check whether different strategies have any effect on their performance or not. Finally, it would appear useful to devote attention, time, and effort to guiding and training students in coping effectively with a multiple-choice reading comprehension tests.

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