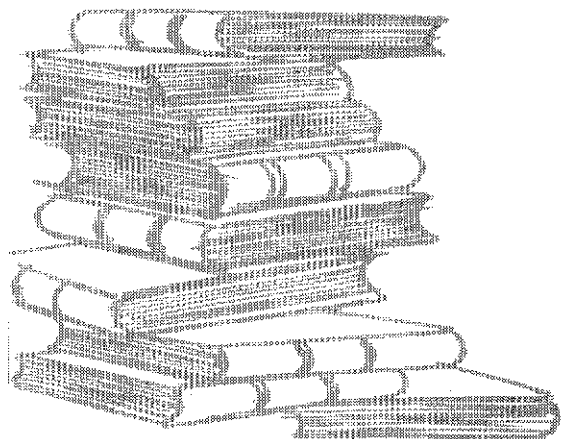


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processing strategies, the taxonomy does represent an exhaustive list of the cognitive operation the subjects in this study reported.

The findings of the study would also suggest that explicitly describing, discussing and reinforcing strategies in the classroom can have a direct pay off on students outcomes.

7.2. Theoretical Implications

Researchers suggest that teaching learners how to use strategies should be a prime consideration in the reading classroom, (Barnett, 1988). Garner (1987, 1990) emphasizes that low proficient readers need guided practice if strategy training is to be successful.

Most of the research in the area of the foreign language learning strategies has focused on the identification, description, and classification of useful learning strategies (see GU and Johnson, 1996, and Oxford, 1996 b).

7.3. Suggestions for Further Research

An area for investigation would be possible to compare and contrast language learning strategies with language use strategies, especially in tasks such as the story telling, in which some learning was expected to be going on while reading the text and using the glosses that were provided.

Another area for further research would be useful to spell out just what strategies - based instruction looks like in the same classroom overtime and in different classroom throughout a language course.

Yet another suggestion for further study

would be to assess the extent to which learners transfer their strategy training from the experiment to performance in subsequent language classes.

Moreover a research can assess strategy use in the two types of reading by receiving a strategy questionnaire in the native language; the least impact of a questionnaire in the native language; the least impact of a questionnaire in the native language may decrease participants' confusion on the six - point scales for the proper selection and, therefore, can result in different decisions.

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7. Conclusions, Implications and suggestions

The results of this study indicate that the readers scoring high and those scoring low appear to be using the same kind of strategies while reading and answering the comprehension questions on either measurements. This seems to indicate that strategic reading is not only a matter of knowing what strategy to use, but also the reader must know to use a strategy successfully and orchestrate its use with other strategies.

It is not sufficient to know about strategies but a reader must be able to apply them systematically. The poorer readers in this study appear to be aware of the right kinds of strategies to be used but they may not know how to determine the successful application of the strategies. Knowing how to assess the success of a given strategy and apply corrective feedback to its use may be a more important skill to develop.

However, strategy use may also be a matter of vocabulary control and general background knowledge. Beginning level language learners may know what strategies to use, but because of the lack of vocabulary or other schema-related information, they might not have acquired enough language foundation to build on.

These findings suggest that there is a statistically significant relationship between the scores of two performances on standardized reading comprehension test and academic reading task, the correlation coefficient being 0.609 at <0.0004 . In strategy use between the two reading measurement,

the null hypothesis is rejected for 45% of the total strategy types (about twenty strategy items in five categories) and the null hypothesis is confirmed in 55% of the strategies.

Another significant finding from these data suggests that the use of the processing strategies while reading for academic purposes in two texts are very similar and in 79% of the examined strategies, there existed statistically meaningful relationship between variables which are strategy items in two text.

Another finding from these data suggests that there is no significant difference in strategy use among these groups of high, mid, and low. High group readers used fewer strategy types than low group readers in SRCT, so the intensity of strategy use does not appear to contribute to a higher score on reading comprehension.

The innovation in this study was to make a direct link between the frequency of use of a given strategy on two reading contexts, so the two variables in the 132 Pearson Product - Moment Correlation Coefficients were strategy types.

7.1. Pedagogical Implications

This investigation has implications both for research and for pedagogical practice. The study aimed to identify the strategies readers reported using while involved in reading standardized reading comprehension test and academic reading task. In particular, the taxonomy of processing strategies developed from subjects' protocols may prove useful to other researchers. Although it was not intended to be a complete representation of all possible

the same and the null hypothesis for the second research question is confirmed.

6.3. Investigation of the Third Research Question

The result of the correlation coefficient between individuals no two types of reading was 0.609 and its probability level was $P < 0.0004$. So the third null hypothesis was rejected and a plausible interpretation would be that those who were skillfull in one performance were also proficient in the other reading task.

6.4. Comparison of participant Ranking

In order to take a closer look at how reading strategies in these two reading contexts were associated with performance, all participants were rank-ordered according to their mean scores on each of the reading instruments. The participants were then divided into three groups of high, mid and low comprehenders according to their scores on these reading.

6.5. Investigation of the Fourth Research Question

In order to know if there was any significant difference among scores in SRCT and ART in different group, an ANOVA with the design of completely random blocks and the comparison of Duncan's Multiple Range Test was computed. The table of ANOVA procedure and Duncan's Multiple Range Test is shown below

As Duncan grouping shows there is statistically significant difference between the groups with different means.

Analysis of Variance Procedure					
Class	Level	Information			
Class	Levels	Values			
GROUP	3	1	2	3	
TEXT	2	1	2		
Number of observations in data set = 60					
Dependent Variable: SCORE					
Source	DF	Anovass	Mean Sqre	F Value	Pr>F
GROUP	2	6794.433333	3397.216667	44.07	0.0001
TEXT	1	17.066667	17.066667	0.22	0.6398
Duncan's Multiple Range Test for Variable: SCORE					
NOTE: This test controls the type I comparisonwise error rate, not the experimentwise error rate					
Alpha = 0.05	df = 56	MSE = 77.09345			
Number of Means	2	3			
Critical Range	5.595	5.852			
Means with the same letter are not significantly different.					
Duncan Grouping	mean	N	GROUP		
A	67.450	20	1		
B	50.400	20	2		
C	41.850	20	3		

6.6. Correlation Coefficient between SRC/ART,

SRC / MTELP, and ART / MTELP

In order to know whether success on a standardized reading comprehension test can be attributed to the level of language proficiency the pearson Product-Moment correlation coefficient for standardized reading comprehension test scores, academic reading task scores and MTELP were computed and led to the following results.

SRC / ART	SRC / MTELP	ART / MTELP
0.60915	0.81364	0.68001
0.0004	0.0001	0.0001

From the above results we can infer that success on a standardized reading comprehension test may be attributed to the level of language proficiency. The higher correlation was achieved by SRCT and MTELP. So we can claim that SRCT is more sensitive to language proficiency than ART.

were computed among 132 independent variables for each one of the 44 processing strategies in two types of reading. The results indicated that in 69 out of 132 or 52% of the cases the null hypothesis was rejected and in 63 cases or 47.7% the null hypothesis was confirmed.

Table 4.7 The Strategies which confirmed the Null Hypothesis (63 cases)

1a	1b	1c	2b	2c	3a	3b	4a	5a	5b
5c	6a	6b	7a	7b	8a	8b	9b	10b	10c
13a	13b	15b	16a	16b	16c	17a	17b	19b	20b
21a	21b	22a	22b	22c	23a	23b	23c	24a	24b
25a	25b	25c	26b	28b	30a	31b	31b	34a	34b
36a	36b	38a	39a	40a	40b	42a	42b	42c	43a
43b	44a	44b							

Total 132 strategies

Table 4.7 The Strategies which rejected the Null Hypothesis (69 cases)

2a	3c	4b	4c	6c	7c	8c	9a	9c	10a
11a	11b	11c	12a	12b	12c	13c	14a	14b	14c
15a	15c	17c	18a	18b	18c	19a	19c	20a	20c
21c	24c	26a	26c	27a	27b	27c	28a	28c	29a
29b	29c	30c	31a	31c	32a	32b	32c	33a	33b
33c	34c	35a	35b	35c	36c	37b	37b	37c	38c
38c	39b	39c	40c	41a	41b	41c	43c	44c	

Note: The numbers 1 to 44 refer to strategy types.

a = Correlation between SR / AR_{1st}

b = SR / AR_{2nd}

c = AR_{1st} / AR_{2nd}

SR = Standard reading comprehension test

AR_{1st} = Academic reading text one

AR_{2nd} = Academic reading text two

6.2. Investigation of the Second Research Question

In order to investigate the second null hypothesis a 2x3 factorial analysis of variance was computed to determine whether the types of strategies in two reading texts among three

groups of individuals show significant differences. Table 4.6 shows the results of the ANOVA. Because $F_{obs} 0.97 < F_{crit} 4.01$, there is no significant difference between the types of strategies in the two reading texts.

Table 4.6 The Results of ANOVA

Source	df	SS	MS	F
A	2-1=1	12.15	12.15	0.97
C	3-1=2	53.2	26.2	2.12
A*C	2	267.6	133.8	10.71*
Error	6(10-1)=54	12.49		
Total	59	1007.65		

A = types of strategies, C = levels, AC = interaction

between types of strategies and levels of individuals

- 1) $F_{obs} 0.96 < F_{crit} 4.01$
- 2) $F_{obs} 2.12 < F_{crit} 3.16$
- 3) $F_{obs} 10.71 > F_{crit} 3.16$

The value for F_{crit} at $p \leq 0.05$ level with $df(1, 54)$ is between 4.03 and 4.00, that is the case that $F = 4.03$ is the degree of freedom for denominator 50 and $F = 4.00$ is the degree of freedom for denominator of 60. Therefore, the mean between these F values will be $F_{crit} = 4.01$. Because $F_{obs} 0.97 < F_{crit} 4.01$, there is no significant difference between types of strategies in the two reading texts. In other words, it can be inferred that the means of the types of strategies in the two different texts are

to be answered by the respondents in a set order. It was adopted from suggestions made by Cohen (1998) and the classification of processing strategies were adopted by Anderson (1991). The questionnaire contained five categories of processing strategies including **Supervising Strategies** consisting of ten questions prepared to investigate language learning and language use strategies from the subjects on the basis of six options. Questions consisted yes-no ones with an indication of frequency to describe language learning behavior used by participants.

The second category of processing strategies was **Support Strategies** which are used for improving reading comprehension in the new language. The third category was the **Paraphrasing Strategies** to extrapolate the information or speculate beyond the information presented in the text. The fourth category was **Strategies for establishing Coherence in text**. These are more specific strategies for determining if the text is coherent. Finally the fifth category is **test-taking strategies** adopted from Nevo's (1986) Test-taking strategies on a multiple choice test of reading comprehension which was used as a starting point for classifying the test-taking strategy data reported.

In the third phase of the experiment, the participants were given a form of academic reading text (ART) and asked to read and answer the multiple comprehension questions. After reading each of the two passages, the participants were asked to report the strategies used while reading and understanding the passage and to report the strategies used in answering the comprehension questions at the end of the passages.

Because no time limits were imposed on the participants during the reading task, they were asked to do this phase at home without using any glossaries or dictionaries and return them after a week. In this regard the questionnaire should be read and answered twice for two texts and the appropriate options should be checked on the tables one and two drawn for this purpose.

The fourth phase of the study was the second administration of the reading comprehension tests. The subjects who took Form A on the first administration took Form B, and vice versa, and it was three weeks after the first test administration. The purpose of this phase of data collection was to have the participants verbalize the strategies utilized while reading and answering the comprehension question during the standardized reading test. Then they responded to the questionnaire for each one of the fifteen reading comprehension tests. Following the self-report method for that portion of the test, the time was then restarted as they continued to read the next passage and answered the questions in this way until a total testing time of forty five minutes had come to an end. If the participants had any difficulty in understanding the concepts of the questions, they received L1 translation.

6. Results and Discussion

6.1. The First Research Question Testing

In order to examine the first null hypothesis stating that there is no relationship between strategy use in SRCTs and ARTs, Pearson Product- Moment Correlation Coefficients

The subjects who scored half SD above & below the mean were considered as mid group (10 subjects) ten from top as high group and ten from the bottom as low group. Then in order to make sure that these groups were not at the same level, a one-way ANOVA was calculated and $F_{ob} 148.64 > F_{cri} 6.11$ because our obtained $F=148.64$ exceeds $F_{ob,ol}=6.11$ and it was concluded that the three groups were not homogenous. Twenty of the subjects were females and ten were males. The amount of time they studied at the university ranged from 3 years to $3\frac{1}{2}$ years.

5.2. Materials

Materials for the study consisted of a test of language skills - standardized reading comprehension tests Form A and Form B which were selected from different sources including TOEFL: "Reading comprehension and vocabulary workbook" by Elizabeth Davy and Karen Davy (1984), the TOEFL: Test of English as a foreign Language copyright (1987) by Education Testing Service, and Reading Comprehensions from Isfahan Language Center. The third type of materials for this research contained academic reading texts selected from **Advanced Reading Comprehension by Gethin (1979)** and the above mentioned book by Davy.

Test of language skills including short reading passages is a standardized reading comprehension test consisting of fifteen reading short passages varying in length from 28 to 185 words, each followed by two to four multiple choice comprehension questions for a total of forty-five questions. The test takes

forty-five minutes to administer. The passages are written on a variety of subjects.

The Kuder Richardson Formula Twenty One (KR-21) reliability coefficient for Form A of standardized reading comprehension tests is 0.78 and for Form B is 0.69. The (KR-21) for Form Q of the MTELP is 0.88 measured by the available scores obtained from 30 subjects. The two academic reading passages or long reading texts consisted of materials from two areas: science and sociology. It is important to note that passages ranged in length from 500 words to 867 words and each followed by twelve comprehension questions for a total of twenty-four questions for the two passages. Multiple choice questions were designed to tap reading skills such as generalizing, sequencing and hierarchical ordering, understanding comparison, and cause-effect relationship.

5.3. Procedure

In the second phase the participants who were selected by MTELP were randomly assigned to two groups, one group taking form A of the test of language skills and the other group taking form B on the second administration of testing. It took 45 minutes for the participants to answer the questions. The purpose of the first reading task was to assess participants' reading comprehension skills in a typical standard test taking. Following the administration of the test of language skills, the participants were required to complete the second reading task containing the academic textbook reading. They were introduced to self-report method that is learners' description on what they do, characterized by generalized statements about learning behavior.

They also received a written questionnaire

protocols are produced when a reader verbalizes her/ his thought processes while completing a given task.

As Cohen (1998, P. 34) has stated verbal-reports include data that reflect: 1) **self-report** 2) **self - observation** & 3) **self - revelation**. Verbal reports can and usually do comprise some combination of these components (Radford, 1974; Cohen & Hosenfeld, 1981; Cohen, 1987a). Self - report data tend to appear on questionnaires which ask learners to describe the way they usually learn and use language. Garner (1982); Flower and Hanyes (1984) have benefited greatly from the extensive use of verbal report in L2 work. Pressley and Afflerbach (1995) focused on the use of verbal reports of the first language (L1) reading.

Oxford (1996) has provided a brief summary of "what have we learned about language learning strategies around the world?" Many previously discovered principles were confirmed about strategy use and strategy instruction, and new ideas evoked for further research. Strategy questionnaire might be neutral and do not typically provide detailed task - related information. Some researchers, like Chamot and colleagues (1996), prefer long-term instruction with gradually increasing awareness and control. Others such as Robbins, Park, Dadour, and Yang carry out shorter strategy projects with very good effect. Only one study by Hajer and colleagues, 1994 has been conducted to determine the frequency with which strategies of various types are included in such books in different cultures.

O'Malley et al. (1985 a, 1985 b) provided instruction in listening and speaking strategies

for ESL students at high school level. Results were not significantly positive for teaching students to listen to details and taking notes, but strategy instruction tied to speaking was significantly beneficial. Nyikos (1996) claims that before strategy instruction for students can occur, strategy instruction for teachers is often necessary. Teachers must make, conceptual shift toward a learner - centered classroom and this involves actual alteration of their belief system.

5. Methodology

The method applied in this study was self report with the use of written questionnaire and interview for investigating learning strategies and strategy use employed by senior university learners while involved in standardized reading comprehension tests as well as academic reading tasks. verbal - report is not one measure, but rather encompasses a variety of measures intended to provide mentalistic data regarding cognitive processing.

5.1. Participants

The participants for the present research were selected from the population of university students studying translation. Thirty senior university students were selected out of sixty by taking form Q of the Michigan Test of English Language proficiency (MTELP) as a placement test. The subjects were in their seventh semester and some were in their eighth semester. Their age ranged from 22 to 32 years. They were further divided into three groups of high, mid, and low comprehenders according to their mean scores of 50.16 and the sample SD of 14.04.

I. Introduction

One of the major problems of the Iranian students in learning a second language, especially English, is their low comprehension in reading academic texts as well as taking reading comprehension tests.

Several studies have tried to find out the reasons for such low levels of comprehension. However most of them have focused on vocabulary, structure, or other aspects of the text itself rather than the reader variables.

It seems that the reader variables play an important role in comprehension. The present study intends to look at reading strategies and see if the problems Iranian students have in this regard are rooted in the lack of vocabulary knowledge or lack of reading strategy use in general. Many SAL studies have recently focused on the strategies of SAL and their use. Such researchers as Ellis(1994), Cook(1993), and Towel and Howkin(1994) have included a chapter or more on strategies in their works. However, the terms strategy of learning plus use still have not been defined uniformly.

2. Statement of the problem

The purpose of this study was to examine individual differences in strategy use by adult second language learners while engaged in two reading tasks: taking a standardized reading comprehension test and reading academic texts. Results on reading comprehension tests are often used to characterize readers, yet the results do not provide any insight into the processes readers have used to arrive at a given answer.

Because tests are designed to operationalize the construct of reading comprehension, this study was designed to examine the individual differences of Iranian second language readers while taking reading comprehension tests and to evaluate the extent to which reading comprehension process during a test reflects reading comprehension process of academic reading texts.

3. Research Questions

The Primary research questions addressed in this study were as follows:

1. What are the reading strategies reported by Iranian second language readers while taking a standard reading comprehension test and doing academic text reading task?
2. What are individual differences in strategy use in the two reading contexts? (standard reading comprehension test and academic reading task)
3. Is there any relationship between individual performances in the two reading contexts? (standard reading comprehension test and academic reading task)
4. Is there any statistically significant difference between different subject groups in the two reading texts? (short and long reading passages)

4. Literature Review

Verbal reports or think-aloud protocols are implemented as a method of identifying mental processes that readers use to understand printed words. Verbal - reports or think - aloud

INDIVIDUAL DIFFERENCES IN STRATEGY USE IN SECOND LANGUAGE READING AND TEST-TAKING

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چکیده فارسی:

پژوهش در نحوه بکارگیری استراتژی‌های یادگیری در زمره اولویت‌های امر زبان‌آموزی سال‌های اخیر قرار داشته است. تحقیق حاضر تفاوت‌های فراگیران را در استفاده از این استراتژی‌ها در مهارت خواندن متون بررسی نموده و نشان می‌دهد که افراد مختلف با میزان مهارت‌های مختلف از استراتژی‌های متفاوتی استفاده می‌کنند. این نکته می‌تواند برای مدرسان زبان از آن جهت قابل تأمل باشد که قبلاً تصور می‌رفت هرچه سطح مهارت فرد بالاتر باشد از استراتژی‌های بیشتری سود خواهد برد، ولی اخیراً معلوم گردیده استفاده زیاد از استراتژی‌ها ارتباط مستقیمی با سطح مهارت ندارد.

واژه‌های کلیدی: راهبردهای خواندن، امتحان دادن، تفاوت‌های فردی، استفاده از

راهبردها

Abstract

This paper reports a study investigating four research questions concerning reading strategies that Iranian students use in their tests of comprehension. The investigation and the statistical calculation showed that there is a relationship between individuals in strategy use in both reading comprehension and test-taking. However, there was no significant difference between types of strategies reported in the reading tests.

Key Words: reading strategy; test-taking; individual differences; strategy use