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# The Effect of Teaching Metacognitive Reading Strategies on Reading Self-efficacy of Iranian Intermediate EFL Students

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## *Abstract*

Research regarding the teaching of reading for English as a Foreign Language (EFL) and English as a Second Language (ESL) is still ongoing. One of the many problems students face nowadays is not their inability to read but their lack of interest, indifference or rejection of reading. This study focused on the effect of teaching metacognitive reading strategy on reading self-efficacy of EFL Iranian students. It was hypothesized that teaching metacognitive reading strategies can have impact on reading self-efficacy of Iranian intermediate EFL students. The data was collected from Iranian students at Dorsa language institute located in Hashtgerd, Alborz province. To make the homogeneity of all the participants, the researchers administrated a language proficiency test (PET) as pre-test to seventy one EFL learners. Out of seventy one students, forty students were selected. They were divided into one experimental and one control group based on their scores. The researchers used independent sample T-Test to measure the statistical differences between the two groups. This indicated that there is no significant difference between two groups. Before receiving instruction the students completed a reading self-efficacy questionnaire. After eleven sessions of strategy-based instruction, the researchers administrated the post-tests to both experimental and control groups. Finally, the results of the analysis of the data revealed that teaching metacognitive reading strategies enhanced reading self-efficacy of the subjects.

**Key Words:** Self-efficacy, Metacognitive reading strategy, EFL

## ***1-Introduction:***

Reading is regarded as a complex process and the prime objective of reading is comprehension. One of the many problems students face nowadays is their lack of interest. Studies based on reading habits have particularly focused on the importance of the promotion of specific strategies to promote their interests, make reading materials available, build an appropriate environment, allow time to read in school, provide significant adult models and use motivational techniques (Clary, 1991). A dozen of studies (e.g., Carrell, Pharis, &Liberto, 1989; Cotterall, 1990) have proved that reading strategies are effective in promoting comprehension. Besides, there are considerable researches that show good readers are strategic readers who use

more strategies than poor readers as they read. Therefore, teaching reading strategies should be the prime consideration in the reading classrooms. Some of studies have found that the most successful individuals understand and use a variety of active study strategies to control and monitor their learning (Yaworski, 1998). These students can also explain the strategies they use and can describe whether or not particular strategies prove to be useful in different situations (Ruzic, 2001).

Second language reading achievement was found to be associated with many factors. One explanation for students' different reading performance may be related to differing reading self-efficacy beliefs. Individuals hold self-efficacy beliefs that enable them to control their thoughts, feelings, and actions. Self-efficacy beliefs are context-specific, or linked to particular domains such as reading. Reading self-efficacy has been closely linked to reading performance. Bandura (1993) stated that when self-efficacy is lacking, people will tend to underachieve, despite knowing what it is they need to do to be successful. It is possible that students exhibiting different reading performance may have the knowledge, skills, and strategies needed to succeed in this field, but are not able to use them successfully due to differing self-efficacy beliefs in reading. Fortunately, there are numerous studies indicating that self-efficacy and achievement can be enhanced through instructional methods that incorporate modeled strategy use, goal setting, and self-evaluation of progress, indicating that students can improve their reading performance through these practices. (e.g.: Andrew, 1998; Bandura, 1997 ; Chemers, Hu, & Garcia, 2001; Greene & Miller, 1996).

The purpose of this study is to find whether teaching metacognitive reading strategies has any effect on reading self-efficacy of Iranian intermediate EFL students.

## ***2- Review of literature:***

### ***2.1. The construct of Self-efficacy:***

The construct of self-efficacy was introduced by Bandura (1977) with the publication of the article Self-efficacy. Self-efficacy, also called perceived ability, refers to the confidence people have in their abilities that they can successfully perform a particular task (Bandura, 1997). "...Humans, who engage in considerable self-reflective thought, boost or undermine their efforts by beliefs about their capabilities" (Bandura, 1986, p. 412). Students with low self-efficacy give up more easily in their academic pursuits than students with high self-efficacy. A student's level of self-efficacy is influenced by past successes and failures which can then subsequently impact future successes or failures, such as grades. Bandura (1997) also refers to four sources of self-efficacy: 1. Mastery experience (our achievements raise our level of self-efficacy), 2. Vicarious experience (other individuals' achievements motivate us to believe that we have the same ability in gaining achievements), 3. Persuasions (what others say can influence our beliefs about our abilities), and 4. Psychological state (as anxiety, stress, and fear can influence our behavior).

### ***2.2. Factors Affecting Self-Efficacy:***

A number of factors, such as *goal setting, information processing, models encouragement, feedback and rewards, socio-economic status, culture* are known to affect self-efficacy and potentially increase it.

*Goal setting:* Goal setting is an important cognitive process affecting achievement outcomes. Students who have a goal may feel a sense of efficacy to attain that goal and work hard to achieve it (Schunk, 1995). They engage in activities that will produce progress towards that goal, such as paying attention during instruction, rehearsing or practicing outside of the classroom, and trying harder.

*Information processing:* Learners who think they have great difficulty understanding the academic material are likely to have low self-efficacy for learning that material, and those who feel capable of understanding the material should have a high sense of efficacy (Schunk, 1995).

*Models:* Learners may acquire self-efficacy from observing peers. Similar peers offer a good basis for comparison and observing them successfully perform a task raises efficacy. On the observing peer models increases efficacy to a greater extent than teacher models or persuasion (Schunk, 1995),

*Encouragement and feedback:* Teachers and parents who encourage students and persuade them that they “can do it” or offer them positive feedback after performance of a task increase the students’ self-efficacy levels (Schunk, 1996).

*Socio-economic status (SES):* this factor has been found to affect self-efficacy in several fields. In their study of 102 low SES and 164 regular Chinese college students, Tong and Song (2004) found that low socioeconomic-status students scored significantly lower than their high socioeconomic-status peers on general self-efficacy. They concluded that socioeconomic status had an important effect on general self-efficacy.

*Culture and self-perceptions:* DeAngelis (2003) observed that people tend to overestimate their abilities for self-serving purposes. Studies by Dunning, Johnson Ehrlinger, and Kruger (2003); and Ehrlinger and Dunning (2003) revealed that individuals often fail to recognize their incompetence, thus inflating their abilities.

### **2.3. Can Self-Efficacy Be Taught?**

Bandura (1997) has listed a number of reasons why he believes that teachers can teach self-efficacy. His reasons evolve around the idea that schools have all the tools and favorable circumstances or teachable moments to continually influence the self-efficacy perceptions of students in a positive way. He argues that the time that students spend in school is crucial to the development and validation of their cognitive abilities. With the mastery of skills or acquisition of knowledge comes a sense of intellectual efficacy. In school, students’ knowledge and skills are constantly tested, evaluated, and compared to those of peers or other groups. A number of factors to enhance self-efficacy are present in schools. There is peer modeling, teacher modeling and comparison with the performance of other students; there are ample opportunities for

teachers' feedback and encouragement, as well as parental involvement. Briefly, schools can be agencies for cultivating self-efficacy among students.

#### ***2.4. Metacognitive Strategies in Reading:***

Poor readers are less aware of effective strategies and of the counterproductive effects of poor strategies, and are less effective in their monitoring activities during reading. With respect to this point, Al Melhi (2000) has found that some differences do exist between skilled and less skilled readers in terms of their actual and reported reading strategies; their use of global and reading strategies, their metacognitive awareness, their perception of a good reader, and their self-confidence as readers and points out training in metacognitive language learning strategies help learners develop their listening and reading skills and raise their language proficiency levels.

Metacognition is defined as —thinking about thinking (Anderson, 2002, p. 23). This term was first coined by Flavell in the mid-1970s. According to Byrd, Carter, and Waddoups (2001), it is accounted as self-awareness of mental process. Oxford (1990) believes that “metacognitive strategies —provide a way for learners to coordinate their own learning process” (p. 136). Others contend that metacognition refers to the knowledge and control that we have over our cognitive processes. As far as it is concerned with reading, it is common to talk about metacognitive awareness (what we know) and metacognitive regulation or control (knowing when, where, and how to use strategies, that is, what we can do). As a whole, metacognitive involves awareness and control of planning, monitoring, repairing, revising, summarizing, and evaluating. Essentially, we learn strategies that support our comprehension (our awareness of strategies) and we learn how to carry out these strategies effectively (our control of strategies) (Baker, 2002, 2008; Pressley, 2002).

### ***3- Method***

In this study the researchers used a quasi-experimental method to determine the situation in line with the purpose of this study.

#### ***3.1- sample:***

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	T	df	Sig.(2- tailed)	Mean Difference	Std Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
<i>Equal variances assumed</i>	2.578	.117	.430	88	.670	.90000	2.09372	-3.33852	5.13852
<i>Equal variances not assumed</i>			.430	31.988	.670	.90000	2.09372	-3.36484	5.16484

The data was collected from EFL Iranian students studying at Dorsa language institute at Hashtgerd, Alborz province. To ensure the homogeneity of the subjects in terms of their language proficiency, the researchers chose students who were studying English at the same level. Moreover, to ensure the homogeneity of the participants, the researchers administered PET, a language proficiency test, to seventy one Iranian intermediate EFL students as a pretest. From among the learners who took part in the testing session, forty learners whose scores were 0.8 standard deviation above and below the mean were selected as the subjects of the study. They were randomly divided into one experimental and one control group based on their scores (each group consisted of 20 students). Each group included both male and female students. Then the researchers used independent sample T-test to measure the statistical differences between the two groups. The researcher considered the level of significance .05. Then they referred to p-value which was computed by SPSS. The result was .67. The p-value associated with the t-test was higher than t-critical ( $> .05$ ), so this revealed that there is no significant difference between the control group and experimental group.

Table (II) displays the descriptive statistics for the experimental and control groups on the homogeneity language test (PET). The mean scores for the experimental and control group were 76.0 and 76.9 respectively.

Table (II) descriptive statistics for experimental and control groups

groups	N	Mean	Std. Deviation	Std. Error. Mean
<i>Control group</i>	20	76.9000	4.98313	1.11426
<i>Experimental group</i>	20	76.0000	7.92730	1.77260

### 3.2- Data collection instrument:

To fulfill the purposes of this investigation the researchers used following instruments:

#### 3.2.1. PET homogeneity test:

At the beginning stage of the research, before entering the treatment process, the researchers had to evaluate the students on their general English proficiency. The researchers used the original PET homogeneity test. This test was administered as a standardized measure to check the homogeneity of subjects in terms of language proficiency. This pre- test included 68 multiple-choice items. PET is planned, prepared and validated by Cambridge ESOL examinations center and enjoys high degrees of reliability, validity, and practicality.

### *3.2.2. The RSPS:*

The Reader Self-Perception scale (RSPS) (Henk&Melnick, 1995) was chosen to measure student perceptions of reading self-efficacy. Henk and Melnick created the RSPS to reflect the basic factors students take into account when estimating their capabilities as a reader. These factors are embedded in Bandura's basic model of self-efficacy. The Self Efficacy Scale was used to measure how children perceive themselves as readers. The Readers Self-Perception Scale (Henk&Melnick, 1995) was piloted and validated by Henk&Melnick, using 56 graduate students in reading at two major universities. The pilot instrument provided evidence of construct validity through principal component analysis of the factor structured. The alpha reliability ranged from .88 to .95.

### *3.3-Procedure:*

The experimental and control group were assigned the same reading materials in their classes and they were taught by the same instructor. However, the control class did not receive the strategy instruction; the experimental group did during the four-week period of this experiment.

The first session, the researchers asked the students to complete the students completed the Reader Self-Perception Scale (RSPS) (Henk&Melnick, 1995). The researchers provided opportunities and materials for practicing the selected metacognitive reading strategies and the lessons were structured for the presentation and practice of strategies. The researchers held eleven sessions. Each session lasted for about 90 minutes. In the entire lessons, first the researchers made the learners more aware of current reading strategies and explained the importance and the application for using additional metacognitive reading strategies. She helped students to evaluate their degree of success with the new reading strategies. She tried to provide examples in order to show the students clearly which strategies are useful, how they are used, and why they are helpful. The lessons were designed to explicitly model and teach the students the metacognitive reading strategies. These strategies included: Making Text-to-Self Connections, Making Text-to-Text Connections, Making Text-to-World Connections, Previewing and Predicting, objective , Creating Questions, Monitoring Comprehension and Using Fix-up Strategies, Setting a Purpose for Reading, Review-Previewing and Predicting, Review-Using Background Knowledge and Questioning, Review-Setting a Purpose and Monitoring Comprehension .

The teaching was designed to be responsive to student’s needs. Also, the amount of time spent on the various phases of teaching (for example, modeling, coaching, supporting) was adapted in response to students’ motivation and performance.

The researchers also had concerned about the students reading self-efficacy. This concern arose from ongoing observations and, in particular, from the students’ behaviors when working in group-research projects. The collaborative nature of such projects provided an opportunity for students to discuss what they were reading. After eleven strategies- based sessions, again the same Reader Self-Perception Scale (RSPS) (Henk&Melnick, 1995) were used as the post questionnaire.

*3.4-Data analysis technique:*

The SPSS 15.0 package program was used for the analysis of data. “Independent sample t-test” was used in order to determine whether teaching metacognitive readingstrategies has any effect on reading self-efficacy of Iranian intermediate EFL students.

Before applying statistical methods, it was necessary to make sure that the assumption of the normality of the collected data was not violated. One common test for checking the normality is Shapiro-Wilk test. The null hypothesis of Shapiro-Wilk test is that the samples are taken from a normal distribution. So, because the p value of the data, in this study, on the Reader Self-Perception Scale (RSPS) (Henk&Melnick, 1995)were greater than .05, the researcher confirmed the null hypothesis, and understood that the samples are taken from a normal distribution. Thus, the researcher needed to use parametric tests.

*Table(III) Normality test*

<i>groups</i>	<i>Kolmogorov-Smirnov<sup>a</sup></i>		<i>Shapiro-Wilk</i>	
	<i>Statistic</i>	<i>Sig.</i>	<i>Statistic</i>	<i>Sig.</i>
<i>Self-efficacy experimental group</i>	.149	.200	.933	.177
<i>Self-efficacy control group</i>	.166	.149	.933	.174

It is worth to mention that after eleven sessions of teaching reading strategies, and obtaining needed information regarding the acceptance or rejection of the null hypotheses, the gain scores from pretests to posttests were computed for each participant by subtracting each person's pretest scores from his or her posttest scores.

#### 4. Findings:

As shown in table (IV), the level of significance was set at .05. Then the researchers referred to p-value which was computed by SPSS. The level of significance was set at .05 result was .00. The p-value associated with the t-test is smaller than t-critical ( $< .05$ ), so there is evidence to reject the null hypothesis. In other words, there is evidence that the means are significantly different at the significance level reported by the p-value.

Since the p-value is lower than its t-critical value, it can be claimed that teaching metacognitive reading strategy has a significant impact on the reading self-efficacy of Iranian intermediate EFL students. Thus the null-hypothesis is rejected.

Table (IV) t-test for equality of means on reading self-efficacy of experimental and control groups

	<i>Levene's Test for Equality of Variances</i>		<i>t-test for Equality of Means</i>						
	<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig. (2-tailed)</i>	<i>Mean Difference</i>	<i>Std. Error Difference</i>	<i>95% Confidence Interval of the Difference</i>	
								<i>Lower</i>	<i>Upper</i>
<i>Equal variances assumed</i>	4.238	.046	4.451	38	.000	29.80000	6.69460	16.24750	43.35250
<i>Equal variances not assumed</i>			4.451	31.059	.000	29.80000	6.69460	16.14733	43.45267

Table (V) displays the descriptive statistics for the experimental and control groups on the reading self-efficacy questionnaire. The mean scores for the experimental and control groups were 54.5 and 24.7 respectively.

Table (V). The descriptive statistics for the experimental and control groups on the Survey of Reading Self- efficacy

<i>GROUPS</i>	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>Std. Error Mean</i>
<i>Experimental</i>	20	54.55	25.69144	5.74478
<i>control</i>	20	24.75	15.37214	3.43731

Considering the data and in answer to research question, a significantly positive effect was found between the use of reading strategies and reading self-efficacy. When comparing the

gain scores between the control group and the experimental group, the researcher found a very significant difference between the treatment and control group's reading self-efficacy. This shows that strategy-based instruction helps students improve reading self-efficacy.

### ***5- Discussion and Conclusion:***

Based on the findings of this study, most of the participants claimed that they felt highly confident of their abilities to complete the tasks. In addition, a significantly positive effect was found between the use of metacognitive reading strategies and reading self-efficacy. When comparing the pretests and posttests between the control group and the experimental group, the researchers found a very significant difference between the treatment and control group's reading self-efficacy. This shows that strategy-based instruction helps students improve reading self-efficacy. The students who used metacognitive reading strategies more reported that they have high self-efficacy. The results of this study showed that English language students generally felt rather confident about their abilities to complete the tasks.

There is a strong link between self-efficacy and language learning strategy use. Pajares (2003) asserted that most of students' difficulties are due to students' self-beliefs. Students' low self-beliefs in themselves rather than their lack of ability in many situations are reason of their low motivation, participation, performance and achievement. It is necessary that teachers and parents pay attention to students' confidence, and don't contribute their failure to their weak knowledge base or inadequate skills. As students believe in themselves and in their abilities to perform tasks, they create greater interest in learning and developing their confidence to keep focus when encounter difficulties during learning. Highly self-efficacious learners show more motivation and engagement in the classroom and better academic performance. Accordingly, instructors should improve this sense of students' efficacy which would be beneficial to their achievement. As effective use of learning strategies has been closely linked to the development of sense of self-efficacy leading to expectations of successful learning (Zimmerman, 1990), learning strategies linked to specific language learning tasks should be explicitly taught in EFL classrooms.

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