Strategy-Based Instruction: A Learner-Focused Approach to Developing Metacognitive Awareness of Iranian University EFL Students

Hossein Tavakoli[1]
Islamic Azad University, Izeh, Iran

Abstract

This article reports on an empirical study that investigated the effectiveness of explicit metacognitive strategy instruction on the development of metacognitive awareness of reading strategies of Iranian intermediate EFL learners. Hence, the following two questions were addressed: 1) Does explicit strategy instruction significantly enhance the learners' metacognitive awareness of reading strategies? 2) What is the overall pattern, frequency and type of metacognitive awareness of strategy use as reported by Iranian EFL learners in the experimental group? A quasi-experimental study was conducted by randomly assigning 100 EFL learners of some intact classes into two groups of experimental and control. The quantitative data were collected by the Survey of Reading Strategies (SORS) and a reading comprehension test. A thirteen-week strategy-based instruction, based on CALLA model, was incorporated into the regular reading course of the experimental group. Control group received no strategy training, but, like experimental group, participated in pre- and post-testing. After controlling the effects of pretest scores, the results of ANCOVA revealed that explicit metacognitive strategy training has a significant positive effect in enhancing metacognitive perception of an extended range of reading strategies by EFL students. The results of the study also indicated that, among the metacognitive reading strategies, global reading strategies (GLOB) were the most preferred reading strategies, followed by the support reading strategies (SUP) and problem solving strategies (PROB). The quantitative findings were further corroborated by qualitative data gathered from the interviews. The findings of this study may have implications for learners, teachers, and materials developers in the field of English language teaching and learning.

Keywords Metacognitive awareness, strategy-based instruction, global reading strategies (GLOB), problem solving strategies (PROB), support reading strategies (SUP)

1. Introduction

Strategies for language learning and language use have been receiving evergrowing attention in the areas of second/foreign language (L2) teaching and learning (e.g., Brown, 1991; Chamot & Kupper, 1989; Cohen & Macaro, 2007; Cohen & Weaver, 2005; Cohen, 1990; Dörnyei, 2005; Grabe, 2010; Griffiths, 2008a, 2013; McDonough, 1995; Mendelsohn, 1994; Naiman et al., 1978; O'Malley & Chamot, 1990; O'Malley, Chamot, Stewner-Manzanares, Kupper, Russo, & Küpper, 1985b; Oxford & Crookall, 1989; Oxford, 1990,

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[1] Bio: Ph.D in TEFL, Department of English, Izeh branch, Islamic Azad University, Izeh, Iran. Email: hntavakkoli@gmail.com

2011; Rubin & Thompson, 1994; Rubin, 1975, 1981; Stern, 1975; Wenden & Rubin 1987; Wenden, 1991.

The most general finding among these scholars is that the use of appropriate language learning strategies leads to improved proficiency or achievement overall or in specific skill areas. Their findings also support the notion that the use of appropriate learning strategies enables students to take responsibility for their own learning by enhancing learner autonomy, independence, and self-direction (Oxford & Nyikos, 1989).

Among language learning strategies, metacognitive strategies are regarded as high order executive skills that make use of knowledge of cognitive processes and constitute an attempt to regulate ones' own learning by means of planning, monitoring, and evaluating. It has been suggested, "Students without metacognitive approaches are essentially learners without direction or opportunity to review their progress, accomplishments, and future learning directions" (O'Malley et al., 1985b, P. 561). Metacognitive strategies also assist learners in becoming more autonomous learners by allowing them to individualize the language learning experience.

1.1. Strategy training research

In the 1990s, there was a shift from simply describing and classifying learning strategies to experimenting with different kinds of interventions in the classroom. The interest was then on whether learners could enhance their language learning by either using new strategies or by using familiar ones more effectively (Cohen & Weaver, 2005). This led to research on strategies-based instruction in L2 contexts which strongly argues for explicit strategy instruction (Graham & Harris, 2000; Pressley, 2000). Strategies-based instruction is a learner-focused approach to teaching that explicitly combines strategy instructional activities with everyday classroom language instruction (Oxford, 2001; Cohen & Dörnyei, 2001, Cohen & Weaver, 2005). The rationale behind the strategies-based instruction is that students should be given the opportunity to understand not only *what* they can learn in the language classroom, but also *how* they can learn the language they are studying.

1.2. Methods of strategy instruction

A number of models for teaching learning strategies in both first and second language contexts have been proposed (e.g., Anderson, 2002; Chamot, 2004, 2005a, 2005b; Chamot, Barnhardt, El-Dinary, & Robbins, 1999; Cohen & Weaver, 2005; Cohen, 1998; Graham & Harris, 2003; Grenfell & Harris, 1999; Harris & Grenfell, 2004; Harris & Prescott, n.d.; Lee & Oxford, 2008; Lee, 2007; Nakatani, 2005; Naughton, 2006; O'Malley & Chamot, 1990; Oxford, 1990, 2011; Wenden, 1999). These instructional models have many features in common. All emphasize the importance of developing students' metacognitive perception of learning strategies and suggest that this is facilitated through teacher demonstration and modeling (Chamot, 2004). All agree on the importance of providing numerous practice opportunities with the strategies so that students can employ them freely. All suggest that students should evaluate how well a strategy has functioned, choose

appropriate strategies for a task, and actively transfer strategies to new tasks and settings. According to Gunning and Oxford (2014), two leading models are the Cognitive Academic Language Learning Approach (CALLA) (Chamot, 2008; Chamot & El Dinary, 1999) and the Styles- and Strategies-Based Instruction (SSBI) model (Cohen, 1998).

The model of strategy instruction, utilized in this study, is the Cognitive Academic Language Learning Approach (CALLA) proposed by Chamot and O'Malley (1994). According to Chamot & Robbins (2005), CALLA is an instructional model for direct language learning strategies instruction and can be used in ESL, EFL, bilingual, foreign language, and general education classrooms. This approach focuses on the integration of three aspects of learning: content area instruction, academic language development, and explicit instruction in learning strategies. It is particularly targeted toward students who have at least an advanced-beginning or intermediate level of English proficiency. According to Chamot (2005), the CALLA model is recursive rather than linear so that teachers and students always have the option of revisiting prior instructional phases as needed.

1.3.   Purpose of the study

There is a paucity of research into exploring the effectiveness of explicit metacognitive strategy training on the leaners' development of metacognitive awareness in an EFL context such as Iran. Previous studies (e.g., Zare-ee, 2007; Jafari & Ketabi, 2012; Jafari & Shokrpour, 2012; Tavakoli, 2014; Naseri & Zaferanieh, 2012; Zare, 2013) have been mostly descriptive and investigated the relationship between awareness of metacognitive strategies and achievement in L2 learning. Hence, this study attempts to explore the issue more deeply by addressing the possible efficacy of explicit strategy instruction on raising students' perception of metacognitive strategies with a particular focus on reading comprehension. The findings of this study may have implications for learners, teachers, curriculum and materials developers in the field of English language teaching and learning.

1.4.   Research questions

The present study asked the following research questions:

1. Does explicit strategy instruction significantly enhance the learners' metacognitive awareness of reading strategies?
2. What is the frequency and type of metacognitive awareness strategy use as reported by Iranian EFL learners in the experimental group?

2. Methodology

2.1.   Participants

The sample consisted of 100 English majors (39 males and 61 females) who were selected through convenience sampling from among undergraduate EFL majors, studying at Islamic Azad University, Izeh Branch, Iran. They ranged in age from 21 to 26 and had already studied English for 6 years at school. Then, the participants were randomly assigned to experimental (*N*=50) and control (*N*=50) group. To make sure that the participants were homogeneous with respect to their level of proficiency in language skills as a

whole, the Michigan Test of English Language Proficiency (MTELP) was given to the them to determine their levels of proficiency. To check the reliability of the test in Iranian context, the obtained reliability of the test, using KR–21 measure of internal consistency was .79. The reliability of the test for the main study was 0.83.

2.2.   Instruments

Five main instruments were used in the study: the Survey of Reading Strategies (SORS), verbal report protocols, Michigan Test of English Language Proficiency (MTELP), a background questionnaire, and a reading comprehension test.

2.2.1. The Survey of Reading Strategies (SORS)

To measure the metacognitive awareness of reading strategies in the experimental and control groups before and after the intervention, this study employed the Survey of Reading Strategies, or SORS (Mokhtari & Sheorey, 2002; Mokhtari, Sheorey, & Reichard, 2008). The SORS has been extensively adapted not only in ESL contexts but also in different EFL contexts, such as in Hungary (Sheorey, Kamimura, & Freirmuth, 2008), Japan (Sheorey et al. 2008), and Bahrain (Malcolm, 2009). In some cases, the SORS has been translated into participants' L1s, such as Arabic (Alhaqbani & Riazi, 2012; Alsheikh, 2009) and Chinese (Zhang & Wu, 2009), to discover the differences between learners' use of reading strategies in their L1 and L2. The SORS covers three broad subcategories of strategies including:

(1) Global Reading Strategies (GLOB), which can be thought of as generalized, intentional reading strategies aimed at setting the stage for the reading act (e.g., evaluating what to read or ignore, noting text characteristics, guessing what the material is about, etc.), contains S1, S3, S4, S7, S10, S14, S17, S19, S22, S23, S25, S26, S29.

(2) Problem Solving Strategies (PROB), which are localized, focused problem solving or repair strategies used when problems develop in understanding textual information (e.g., re-reading for better understanding, going back when losing concentration, pausing and thinking about reading, etc.), contains S8, S11, S13, S16, S18, S21, S27, S30.

(3) Support Reading Strategies (SUP), which provide the support mechanism aimed at sustaining responses to reading (e.g., underlining or circling information, paraphrasing for better understanding, going back and forth in the text, contains S2, S5, S6, S9, S12, S15, S20, S24, S28.

In this instrument each item is accompanied with a 5-point, Likert-type scale, 1 (never or almost never do this), 2 (only occasionally do this), 3 (sometimes do this), 4 (usually do this), 5 (always or almost always do this). The higher the number that respondents indicate applies to them, the more frequent the use of the particular strategy is reflected. Mokhtari and Sheorey (2002) provided a key to interpreting the mean for each item and overall item ratings of the SORS. They considered a mean ≤ 2.4 as low usage, 2.5–3.4 as medium usage, and ≥ 3.5 as high usage.

To check the reliability of the instrument for Iranian learners, the SORS was piloted by 60 undergraduate EFL majors (20=male, 40=female) who were selected through cluster random sampling from EFL majors studying at

different universities in Isfahan. The obtained Alpha Coefficient for the 30-item SORS was 0.80, indicating a highly reliable index for the questionnaire. Likewise, the reliability of the SORS for the main study was 0.84, using Cronbach's Alpha.

The validity of the instrument was also checked by evaluation done by some experts in the field of applied linguistics.

2.2.2. Verbal report protocols

In order to increase the reliability of the results of the study and permit a degree of triangulation in the study, some students were chosen randomly from each proficiency group and interviewed by the researcher. The students were asked questions about whether they were familiar with the strategies before the instruction, whether researchers' modeling of the strategies helped them follow the strategies more easily, which strategies they found most useful, and how they felt about the usefulness of the strategy instruction program; and its effect on their reading comprehension ability. The researcher also collected retrospective accounts from the experimental teacher as to the structure and content of the treatment class.

2.2.3. Background questionnaire

Also, a background questionnaire of Mokhtari (2008, PP. 159-160) was adapted to determine how similar the experimental and control groups were in the following areas: participants' nationality, age, starting age of learning, previous language study, reasons for studying the target language, contact with native speakers (how, where, and why they had had contact), and visits to the target culture (for work, vacation, etc.). T-tests indicated that the two groups did not differ significantly on any of the background characteristics.

2.2.4. The Michigan Test of English Language Proficiency (MTELP)

To make sure that the participants were homogeneous with respect to their level of proficiency in language skills as a whole, the Michigan Test of English Language Proficiency (MTELP) was given to the them to determine their levels of proficiency. To check the reliability of the test in Iranian context, the obtained reliability of the test, using KR–21 measure of internal consistency was 0.79. The reliability of the test for the main study was 0.83. The results of independent samples *t*-test at the beginning of the study indicated that the students were at the same level of proficiency.

2.2.5. Reading comprehension test

A reading comprehension test was designed and piloted. The test comprised 50 multiple-choice items with five authentic passages, ranging from 120 to 150 words in length and the average readability index 7, using Fog Index. To compute the internal consistency and reliability of the instrument, it was given to 40 undergraduate EFL majors (30=male, 10=female) who were selected through cluster random sampling so as to represent the entire sample of subjects chosen for the main study. The reliability of the test through KR-21 indicator of reliability was calculated 0.81, indicating that the test enjoyed a reliable measure of reading ability. Likewise, the reliability of the test computed for the main study was 0.88, using KR-21. The validity

of the instrument was also checked by evaluation done by some scholars in the field.

To measure the reading ability of the participants, all subjects from the experimental and control groups were asked to complete the same test on a pre-posttest basis to determine whether there were gains in reading ability over the twelve-week term. The reading test was expected to elicit a range of metacognitive reading strategies.

2.3. Procedures

The study consisted of three phases: (1) pretesting (2) strategy instruction and (3) posttesting. Before the strategy instruction, both groups of students were given a test of reading as a pretest in order to assess their current reading comprehension ability. After administering the test of reading, the SORS was given to students in order to assess their current awareness of the metacognitive strategies in reading comprehension. Before the SORS was administered, the participants were informed about the purpose of it and that there were no right or wrong answers to it. They were also informed that their responses would be confidential and would not affect their course grades.

At the second stage, the participants attended English classes about 90 minutes per week in a thirteen-week semester (Spring 2014). During the treatment sessions, the students in the experimental group received instruction in a strategies-based format. Rather than being presented as a separate learning task, the strategies were incorporated into the classroom reading activities. At times, the focus on strategies was explicit in that the instructor provided strategy training, and at other times they were implicitly embedded into the classroom activities. The experimental group received instruction necessarily in those metacognitive strategies that could be applied only to the skill of reading. During classroom strategy instruction, the teacher described, modelled, and gave instances of potentially useful reading strategies; he elicited additional examples from students based on the their own learning experiences; he set up small group/whole class discussions about reading strategies (e.g., the rationale behind strategy use, planning an approach to a specific task, evaluating the usefulness of chosen strategies); and he encouraged the students to experiment with a broad range of reading strategies.

More specifically, the strategy instruction phase followed the CALLA Model (Chamot, 2009). For this study, the CALLA strategy model was implemented due to its flexibility and sequential cycles, allowing learners to select their preferred strategy and practise it within contextualised activities.

Stage 1: Preparation. The main purpose of this initial phase for the teacher was to help students identify the strategies they are already using and develop their metacognitive perception of the relationship between their own mental processes and effective learning. In this stage, the teacher talked about the importance of metacognitive reading strategies and a handout including different metacognitive strategies was distributed to the students.

Stage 2: Presentation. This phase focused on explaining and modeling the learning strategies. The teacher explained the characteristics, usefulness, and applications of the strategy explicitly and through examples and

illustrated his own strategy use through a reading task. Learners were explicitly taught about how the strategy is used, why it is important and when and how it applies to the specific task at hand. In essence, the preparation and planning, the selection of appropriate reading strategies, monitoring of strategy selection and use, and evaluation of usefulness of metacognitive strategies for reading comprehension were all illustrated through several examples.

Stage 3: Practice. In the third stage of strategy instruction, learners were given the opportunity of practicing a specific strategy or a set of strategies with an authentic reading task. One of the key characteristics of this phase was to integrate strategy instruction into the regular class work so as the students can make a solid connection between the new strategy and real-life tasks and activities that they must accomplish. It was also important that the tasks were challenging enough to require the use of the new strategy, but not so difficult that they are overwhelming (Chamot, et al., 1999).

Stage 4: Self-evaluation. In this phase, the students were given opportunities to reflect on and evaluate their success or failure in using reading strategies, thus enhancing their metacognitive awareness of their own learning processes. Activities such as debriefing discussions, learning logs, informal self-checklists and open-ended questionnaires were used to develop students' self-evaluation insights. Self-evaluation seems to promote learner autonomy and enable the instruction to be more individualized (O'Malley & Chamot, 1990; Oxford, 1990; Oxford, et al., 1990; Chamot & O'Malley, 1994; Cohen, 1998; Chamot, Barnhardt, El-Dinary, & Robbins, 1999).

Stage 5: Expansion. In this final stage of strategy instruction, students were encouraged to transfer the strategies that they found most effective to new contexts and to develop their own individual combinations and interpretations of metacognitive learning strategies.

During the fourteen-session treatment, the control group received no strategy instruction but underwent a traditional-based instruction on reading. After the instruction period, the same pretest was given as a posttest to both groups. Finally, to compare the perception of the metacognitive reading strategies of the experimental group with those of the control group before and after the intervention, the same SORS was given to the students after the instruction.

2.4. *Data analysis*

The Statistical Package for the Social Sciences (SPSS) was employed for the statistical analysis of the data and the significance level of $p < .05$ was set. The analysis included the use of descriptive statistics and inferential tests such as independent t-tests and one-way analysis of covariance. For scoring the reading comprehension and MTELP, one score was assigned to each correct answer. The scores for all items were then added up and an ultimate score was calculated for every participants.

3. Findings

The descriptive comparison made between the scores of the students in the initial SORS questionnaire and the SORS questionnaire used by the end of the intervention showed that students in the experimental group obtained

higher mean posttest scores on the overall strategy use (M=3.28) than the control group (M=2.44). Likewise, students in the experimental group attained much higher mean posttest scores on the subcategories of the SORS (GLOB=3.53, SUP=3.44, PROB=2.89) than the students in the control group (GLOB=2.94, SUP=2.31, PROB=2.08). Table 1 presents the means and standard deviations for each of the three strategy category and the overall strategy use.

Table 1
Means, standard deviations, rank, and overall strategy use for pretest and posttest scores on the three subscales of the SORS

Strategy Type	Test	Control G.		Experimental G.		
		M	SD	M	SD	Rank
GLOB	Pretest	2.90	.58	2.88	.57	1
	Posttest	2.94	.54	3.53	.51	
PROB	Pretest	1.99	.51	2.03	.50	3
	Posttest	2.08	.48	2.89	.44	
SUP	Pretest	2.25	.60	2.27	.59	2
	Posttest	2.31	.52	3.44	.50	
Overall Strategy Use	Pretest	2.38	.56	2.39	.55	
Overall Strategy Use	Posttest	2.44	.51	3.28	.48	

In order to statistically test whether reading strategy training could raise the students' metacognitive awareness of reading strategies in the experimental and control groups while cancelling out the effect of the groups' scores obtained from the SORS employed in the initial survey, ANCOVA was run.

Table 2
Results of ANCOVA on posttest scores using pretest as a covariate

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	34.404[a]	2	17.202	54.914	.000	.531
Intercept	38.726	1	38.726	123.626	.000	.560
Pretest	.077	1	.077	.244	.622	.003
Groups	34.381	1	34.381	109.755	.000	.531
Error	30.386	97	.313			
Total	916.088	100				
Corrected Total	64.790	99				

a. R Squared=.531 (Adjusted R Squared=.521)

As the results show (see Table 2), significant difference was found for strategy training (*F*=109.755, p=000, eta squared=.531), suggesting that explicit strategy instruction could significantly enhance students' metacognitive awareness of reading strategies. The qualitative results

obtained from the analysis of the interviews are also consistent with those obtained from the statistical analyses.

3.1.   What is the overall pattern, frequency and type of metacognitive awareness of strategy use as reported by Iranian EFL learners in the experimental group?

As shown in Table 3, participants' awareness of reading strategy use showed that most of the 30 reading strategies were used at a high- and medium-usage level In fact, 15 strategies were reported to be used at a high-usage level (Mean=3.5 or higher), 11 at medium-usage level (Mean=2.5-3.4), and the remaining 4 strategies were at a low-usage level (Mean=2.4 or lower). The 5 highest means are GLOB #1, GLOB #4, GLOB #3, GLOB #10, and GLOB #17. The five least often used strategies are PROB #8, GLOB #7, GLOB #29, PROB #30, and SUP #5.

Table 3
Item mean, standard deviation, rank, and average use for the three strategy subscales

Rank	Strategy	Type	M	SD	Average use
1	1	GLOB	4.52	.52	High
2	4	GLOB	4.33	.59	High
3	3	GLOB	4.28	.48	High
4	10	GLOB	4.22	.49	High
5	17	GLOB	4.15	.41	High
6	19	GLOB	4.10	.57	High
7	6	SUP	4.00	.43	High
8	2	SUP	3.92	.52	High
9	24	SUP	3.80	.44	High
10	27	PROB	3.74	.43	High
11	15	SUP	3.69	.51	High
12	28	SUP	3.60	.54	High
13	20	SUP	3.59	.48	High
14	18	PROB	3.57	.42	High
15	12	SUP	3.51	.41	High
16	22	GLOB	3.43	.59	Medium
17	26	GLOB	3.40	.43	Medium
18	25	GLOB	3.36	.49	Medium
19	13	PROB	3.30	.41	Medium
20	11	PROB	3.21	.46	Medium
21	9	SUP	3.11	.49	Medium
22	23	GLOB	3.00	.48	Medium
23	14	GLOB	2.86	.53	Medium

24	21	PROB	2.63	.48	Medium
25	16	PROB	2.47	.50	Medium
26	8	PROB	2.43	.44	Medium
27	7	GLOB	2.17	.48	Low
28	29	GLOB	2.09	.59	Low
29	30	PROB	1.80	.43	Low
30	5	SUP	1.77	.41	Low

4. Discussion

With regard to the first research question, the findings of this study are in line with those carried out by, for example, Carrell, Pharis, & Liberto (1989), Zhicheng (1992), Benito, Foley, lewis, & Prescott (1993), Auerbach and Paxton (1997), Carrell (1998), Soonthornmanee (2002), and Wright and Brown (2006). The results of these enquires indicated that the students' metacognitive awareness increased at the end of the awareness-raising programs.

Regarding the second research question, the five highest means are GLOB #1, GLOB #4, GLOB #3, GLOB #10, and GLOB #17 and the five least often used strategies are PROB #8, GLOB #7, GLOB #29, PROB #30, and SUP #5. The GLOB strategies were the most preferred metacognitive strategies according to the students' reports. Strategies such as "I have a purpose in mind when I read" (Item #1, M=4.52, SD=.52), "I take an overall view of the text to see what it is about before reading it" (Item #4, M=4.33, SD=.59), "I think about what I know to help me understand what I read" (Item #3, M=4.28, SD=.48), "I underline or circle information in the text to help me remember it" (Item #10, M=4.22, SD=.49), and "I use context clues to help me better understand what I am reading" (Item #17, M=4.15, SD=.41), were the most preferred strategies. On the contrary, strategies such as "I review the text first by noting its characteristics like length and organization" (Item #8, M=2.43, SD=.44), "I read slowly and carefully to make sure I understand what I am reading" (Item #7, M=2.17, SD=.48), "When reading, I translate from English into my native language" (Item #29, M=2.09, SD=.59), "When reading, I think about information in both English and my mother tongue." (Item #30, M=1.80, SD=.43), and "When text becomes difficult, I read aloud to help me understand what I read." (Item #5, M=1.77, SD=.41) were the least preferred strategies.

The choice of GLOB strategies as the most favored category might be interpreted as indicating that the students had the ability to plan and manage their reading comprehension process. "I have a purpose in mind when I read" (Item #1, M=4.52, SD=.52) was the most preferred global reading strategy, which could imply that participants planned before doing any reading. Furthermore, some GLOB strategies that the participants reported to use displayed their online decision making (Alhaqbani & Riazi, 2012). Strategies such as "I use context clues to help me better understand what I am reading" (Item #17, M=4.15, SD=.41), "I underline or circle information in the text to help me remember it" ((Item #10, M=4.22, SD=.49), and "I try to picture or visualize information to help remember what I read" (Item #19, M=4.10, SD=.57) possibly contribute to better regulation of their

reading comprehension. However, "I read slowly and carefully to make sure I understand what I am reading" (Item #7, M=2.17, SD=.48) and "When reading, I translate from English into my native language" (Item #29, M=2.09, SD=.59) were among the least preferred GLOB strategies, implying that slow reading and translation are unlikely to contribute to the meaning and comprehension of reading passages.

According to the students' overall strategy use, the SUP strategies (Mean=3.44) were the second-favored strategy subscale. Strategies such as "I think about whether the content of the text fits my reading purpose" (Item #6, M=4.00, SD=.43), "I take notes while reading to help me understand what I read" (Item #2, M=3.92, SD=.52), "I try to guess what the content of the text is about when I read" (Item #24, M=3.80, SD=.44), "I use tables, figures, and pictures in text to increase my understanding" (Item #15, M=3.69, SD=.51), "When I read, I guess the meaning of unknown words or phrases" (Item #28, M=3.60, SD=.54), "I use typographical features like bold face and italics to identify key information" (Item #20, M=3.59, SD=.48), and "When reading, I decide what to read closely and what to ignore" (Item #12, M=3.51, SD=.41), were the most preferred SUP strategies and used at high-usage level (Mean=3.5 or higher). The SUP strategy "I try to get back on track when I lose concentration" (Item #9, M=3.13, SD=.49) was reported at medium-usage level. Among the 30 reading strategies, the SUP strategy "When text becomes difficult, I read aloud to help me understand what I read" (Item #5, M=1.77, SD=.41) was reported as the least preferred reading strategy. While the moderate usage of SUP strategy subscale was reported in the present study several other studies repotted low usage of it (Riazi, 2007; Alhaqbani & Riazi, 2012; Sheorey & Baboczky, 2008; Sheorey & Mokhtari, 2001). It may imply that the value of support strategies depends largely on their context of use (Zhang & Wu, 2009), and thus students' needs and wants seem to determine their flexibility of strategy use as well as their autonomy in using those strategies (Alhaqbani & Riazi, 2012).

The PROB strategies were the least preferred strategies according to the students' reports. Among this subcategory, strategies such as "I stop from time to time and think about what I am reading" (Item #16, M=4.03, SD=1.20) and "I check to see if my guesses about the text are right or wrong" (Item #27, M= 4.00, SD=1.21) were the most widely used strategies. PROB strategies such as "I adjust my reading speed according to what I am reading" (Item #11, M=3.76, SD=1.16), "I review the text first by noting its characteristics like length and organization" (Item #8, M=3.74, SD=1.04), "I paraphrase (restate ideas in my own words) to better understand what I read" (Item #18, M=3.66, SD=1.06), and "When reading, I think about information in both English and my mother tongue" (Item #30, M=3.46, SD=1.19) were among the least preferred strategies. A possible explanation for the low usage of PROB strategies is that students might not have recognized the need for using these strategies. In other words, they might have uncertain knowledge of how to employ them at the proper time and place. According to Lorch, Lorch & Klusewitz (1993), strategic reading requires not only a set of processing strategies but also knowledge about the conditions under which a given strategy is relevant. Thus, another possible

explanation may refer to certain types of reading situations, which are likely to trigger certain types of reading strategies.

The students' prime preference for global strategies (GLOB), followed by support strategies (SUP) and problem-solving strategies (PROB) is not consistent with several previous studies that examined the perceptions' of reading strategies via SORS (Alhaqbani & Riazi, 2012; Alsheikh, 2009; Alsheikh, 2011; Dhanapala, 2010; Mokhtari, 2008; Mokhatari and Reichard, 2002; Mokhtari & Reichard, 2008; Mónos, 2005; Zhang & Wu, 2009). The results are also in contrast with other studies where subjects nominated support strategies as their preferred choice, for instance, Hungarian university students (Sheorey & Baboczky, 2008) and both ESL students and native English-speaking U.S. college students (Sheorey & Mokhtari, 2001). The results of this part of the study were also partially consistent with some studies that assessed the metacognitive awareness of reading strategy by using MARSI. A study by Mokhtari and Reichard (2002) indicated that the total average use of reading strategies was moderate, and the prime preference was for problem solving, followed by global and support reading strategies. Similarly, the results of the present study showed that the overall reading strategy use (Mean=3.28) was definitely moderate, but the order of preference was totally different.

5. Conclusions

The main purpose of the present study was to shed light on the issue of strategy training. To this end, the researcher investigated the effect of metacognitive strategy training through the use of explicit strategy instruction on the development of metacognitive awareness of Iranian EFL students. The findings showed that explicit metacognitive strategy instruction, if incorporated into everyday L2 classroom activities and tasks, can positively enhance metacognitive awareness of the students. In practice, this study supported the idea that language classrooms should have a dual focus not only on teaching language content, but also on developing learning processes (Ellis & Sinclair, 1989; Willing, 1990; Nunan, 1995a, 1995b).

The findings of the present study have implications for learners, teachers, and materials developers in the field of teaching English as a foreign language. University EFL learners need to recognize more fully that developing and applying learning strategies could improve their language skills in their content subjects and their academic performance as well. Use of appropriate learning strategies can enable students to take responsibility for their own learning by enhancing learner autonomy, independence and self-direction (Dickinson, 1987). Nevertheless, university students cannot be expected to acquire and employ successful reading strategies incidentally, yet many come to language classes without a full awareness of what is expected of them. These students continue to use inappropriate strategies with no understanding of the limitations of their habitual way of learning or more productive options for completing academic tasks (Dreyer & Nel, 2003). Therefore, teachers should help them to know not only what strategies to use but also when and how to employ them. They can help students identify their current metacognitive awareness by means of a variety of data collection methods and consciousness-raising techniques such as

questionnaires, informal self-checklists, one-on-one and group interviews, diaries, verbal reports, and other means. They can also assist their students to learn quicker, easier, and more effective by weaving reading strategy training into their regular classroom activates and tasks. Such an approach is likely to help learners to be metacognitively aware as well as to become effective users of the language and eventually to become strategic language learners (Alhaqbani & Riazi, 2012). Moreover, for the instruction to be more fruitful, teachers should be trained in strategy instruction and assessment. Materials developers should also play a key role in designing and incorporating tasks and exercises into the reading materials that elicit a wide range of reading strategies and by providing multiple practice opportunities so that students can employ strategies autonomously.

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