The Impact of Teaching Explicit Cognitive and Metacognitive Reading Strategies and Increasing Structural Awareness on Reading Comprehension among Persian EFL Learners

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Abstract: This Article, both qualitatively and quantitatively, investigated the effect of teaching reading strategies and structural awareness on the development of reading ability of Persian EFL learners. Eighty female adult elementary students, randomly assigned to control and experimental groups, participated in the study. The two groups, participating in the classes of a language institute and studying the Interchange series, third edition, Book One (Richards, et al., 1997), received the same instruction with respect to speaking and listening skills. They were, however, treated differently concerning the reading comprehension section of their textbook. That is, while the control group was taught through the NIC method of teaching reading comprehension recommended by the teacher's book, the experimental group were acquainted with different reading strategies and made conscious of the particular structures, which led to a more efficient comprehension of the reading texts dealt with in class. An alpha level of $p < 0.05$ was used throughout. An independent t-test was also run to compare the mean strategy use between EG participants with the highest RC scores and those with the lowest scores. The findings of the study indicated that the treatment significantly improved students' scores on reading comprehension. In the qualitative phase of the study, the students were asked to report the strategies they used while answering the reading comprehension questions. The results obtained from this retrospective think aloud confirmed the findings obtained though the quantitative analysis of the data. Implications of the study have been discussed.

Introduction

Reading is a complex process including a combination of perceptual, psycholinguistic, and cognitive abilities (Adams, 1990). It is widely accepted that the three key components of reading are accuracy (involving phonological and orthographic processing), fluency (involving time), and comprehension. The main goal of reading is to extract and construct meaning from the text (Sweet, & Snow, 2002). Reading comprehension is a complex cognitive ability requiring the capacity to integrate text information with the prior knowledge of the reader and resulting in the elaboration of a mental representation (Afflerbach, 1990). Thus, reading comprehension is an interactive process that takes place between a reader and a text (Rumelhart, 1994); during this interaction, the reader brings variable levels of experiences and skills which include language skills, cognitive resources and world knowledge. Ample evidence attests to the important role of word-level processes such as reading decoding and reading fluency to accomplish the higher-order processing involved in reading comprehension (Tan, & Nicholson, 1997).

The readers' involvement in the text is of crucial importance since they should develop, modify and even reflect on all or some of the ideas displayed in the text. A person is unlikely to comprehend a text by accident. If the person is not aware of the text, not attending to it, not choosing to make meaning from it, or not giving cognitive effort to knowledge construction, little comprehension occurs (Guthrie & Wigfield ,1999). In reading, readers have been found to employ a wide range of strategies, while they are engaged in comprehending a text (Paris, Wasik, & Turner, 1991), since reading comprehension "involves conscious and unconscious use of various strategies, including problem solving strategies to build a model of meaning" (Johnston, cited in Griva and Anastasiou, 2009).

Strategy

Strategy is conceived as a deliberate goal-directed action (Pereira-Laird, & Deane, 1997), which can be either conscious or unconscious or automatic. Specific, deliberate, goal–directed mental processes or behaviors, which control and modify the reader's efforts to decode a text, understand words and construct the meaning of a text (Griva and Anastasiou, 2009). Reading strategies have been usually classified into three broad categories, depending on the level or type of thinking processing

involved: cognitive, metacognitive and social/affective strategies (Chamot, 1987; O'Malley & Chamot, 1990). A coordinated three-part knowledge-focused reading comprehension strategy (Vitale and Romance, 2001) Social/affective strategies are more of a psychological nature and were not observed through this research, however some instances are positive effects of learning on norm-referenced tests in reading comprehension (Romance & Vitale, 2001), engagement of the students in the activities (Rose & Meyer, 2002) and type of the content (Kucan & Beck, 1997).

Comprehension

Comprehension refers to readers' understanding of the basic meaning which a sentence expresses - the propositions. Propositions consist of (a) something which is named or talked about what is known as an argument, or the entity; and (b) an assertion or prediction which is made about the argument. The constituent parts of propositions are words, phrases, sentences, and paragraphs. So, as long as the reader understands the meaning of a certain proposition, he/she is said to be involved in comprehension. Since the propositions consist of words, sentences, or paragraphs, readers' cognitive levels of comprehension can be judged based on these propositions, which means, one person might only engage in lexical comprehension (words), while another may get involved in syntactic comprehension (sentences), whose level is obviously higher than that of lexical comprehension. Comprehension means being able to go beyond the words and understand the ideas and relate or compare different ideas in a book (McNamara, 2007)

Reading comprehension (RC) is a product of complex interactions between the properties of the text and what readers bring to the reading situation. Proficient readers approach a text with relevant knowledge, word decoding ability, text-based and situation model-based inferencing skills, competency with a variety of reading strategies, metacognitive skills, and so on (Magliano et al., 2007) Most research related to comprehension monitoring has been conducted with native English speakers. She claims that comprehension monitoring is more important for L2 readers, as they will probably encounter more linguistic difficulties than L1 (native speaker) readers do and thus need to "repair more gaps in their understanding" through comprehension monitoring (Block, 1986) In addition to strategy use, structural awareness is a deciding factor in RC (Oxford and Rang Lee 2007)

Structural awareness refers to the ability to manipulate and reflect on the grammatical structure of language syntactic awareness is a metalinguistic skill, distinct from the comprehension or production

of a sentence (Cain, 2007) Structural awareness is believed to help word recognition skills by aiding a reader to use the syntactic constraints of a sentence to understand unfamiliar words (Rego & Bryant, 1993) and …reading comprehension by facilitating sentence-and text-level integration and monitoring skills (Tunmer & Bowey, 1986).

This article investigates of the relationship between the use of reading strategies and sentence structure awareness and overall reading comprehension for readers of English as a foreign language. It is designed to address the following research questions:

1- Do structural awareness and reading comprehension strategies affect Iranian EFL students' performance in reading comprehension?

2- Are there any differences between more proficient and less proficient readers in the use of reading comprehension strategies?

Methodology

Participants

Eighty female adult students participated in this study. They were 23 years old on the average and they were all studying in elementary level (E3) in an English language institute. They were studying in 4 classes and they were divided into two groups, i.e. the control group (CG, hereafter) and the experimental group (EG, hereafter). There were 40 participants in each group.

Instrumentation

The data was gathered through six instruments. The first was a strategies questionnaire containing 22 Likert-type items which presented cognitive and metacognitive strategies, this 22-item questionnaire was developed by Taraban, Kerr and Ryneason (2004). The second source of data was a standardized general English test administered at the beginning of the study to determine that the participants of the two groups were at a similar level of general knowledge. The participants were also tested for their knowledge of vocabulary, grammar and reading comprehension separately both at the beginning and end of the study. Finally some participants were randomly selected and asked to explain (face-to face interviews) why they had chosen each choice in RC posttest.

Procedure

The participants of the experimental group were taught using the NIC (New Interchange) method, and the participants of the experimental group were treated with the method under study; the explicit teaching of cognitive and meta-cognitive reading comprehension strategies and raising students' structural awareness. The participants in the control group were taught using the methodology proposed by Richards et al. (1997) in the teacher's edition.

Experimental group was treated differently; for reading comprehension, they were provided with explanations of cognitive and meta-cognitive reading strategies in their native language, Persian, and several illustrations were presented on the board to clarify the use of these strategies. In each session when there was a reading exercise, the teacher taught and reviewed some of the strategies.

After collecting the data mentioned in the previous section, using the latest version of SPSS software (Version 18), matched t-tests and independent t-tests were run to compare the performances of the two groups with each other at the beginning and at the end of the experiment. Each group's performance on the vocabulary test and the grammar test were also compared to check if there were any differences between the control group and the experimental group. Furthermore, independent t-tests were run to compare the responses of the two groups to the strategy questionnaire collected at the beginning and the end of the experiment.

Results

Test of Homogeneity

To ensure the homogeneity of the two groups of participants they were compared with regard to their proficiency level, reading comprehension ability, level of strategy use, and knowledge of the structures they were supposed to learn and use in reading comprehension.

Proficiency Test

To ensure the homogeneity of the two groups of participants they were compared with regard to their proficiency level, reading comprehension ability, level of strategy use, and knowledge of the structures they were supposed to learn and use in reading comprehension. At the beginning of the experiment it was important to check the participants' general knowledge of English to see whether they were at the same level. Table 1 below summarizes the descriptive statistics about the participants.

Table 1-Descriptive Statistics of the Proficiency Test

Groups	N	Mean	Std. Deviation	Std. Error Mean
Control	40	78.45	10.471	1.656
Experimental	40	79.35	11.263	1.781

As the table shows, the mean of CG is 78.45 and that of EG is 79.35. The standard deviation for CG is 10.47 and that of EG, 11.26. The mean of EG is slightly higher. In order to see if the difference between the means was significant, an independent t-test was also run

Table 2-The results of independent t-test for the group differences in proficiency level

	F	Sig	t	df	Sig(2-tailed)	Mean Difference
Proficiency test Equal variances assumed	0.599	0.441	-0.371	78	0.712	-0.900

As the results presented in the table show, the two means are not significantly different (t= 0.37, p>0.05). Thus, one can be certain that the two groups were similar in terms of proficiency level at the beginning of the experiment and any possible difference between the two groups at the end of the experiment could not be the result of the higher proficiency level of one group at the beginning of the experiment.

Reading Comprehension

A reading comprehension pretest was given to the participants to see if the two groups were the same in terms of their reading skills. Descriptive statistics for the reading pre-test are presented in Table 3.

Table 3-Descriptive Statistics of Reading Comprehension Pretest

Groups	N	Mean	Std. Deviation	Std. Error Mean
Experimental	40	73.40	8.969	1.418
Control	40	72.80	9.291	1.469

As the table shows, the mean of EG (73.40) is almost as large as the mean of CG (72.80); the standard deviations of the two groups are also close (CG: 9.29, EG: 8.96). An independent t-test was run to see whether the observed difference was significant or not. The results are presented in Table 4.

Table 4-Independent sample t-test for the group differences in reading proficiency

	F	Sig	t	df	Sig(2-tailed)	Mean Difference
RC Pre-test Equal variances assumed	0.057	0.812	0.294	78	0.770	0.600

The results of the t-test revealed that there was no significant difference between the two groups (t= 0.29, p> 0.05) with regard to their reading performance; therefore the two groups were similar with respect to their reading comprehension ability.

Vocabulary Knowledge

Taking the factor of vocabulary into consideration in studying reading comprehension is an important point, and that is why the present study used vocabulary pre and posttests as well. As such, the participants took a vocabulary test at the beginning of the experiment. The descriptive data is presented in Table 5.

Table 5-Descriptive Statistics of the Vocabulary Pretest

Groups	N	Mean	Std. Deviation	Std. Error Mean
Experimental	40	73.75	9.427	1.490
Control	40	73.05	9.618	1.521

As indicated, the two means (73.75 and 73.05) are very close. However, an independent t-test was used to see whether the groups were statistically different or not. Table 4.6 shows that the small difference between the two means is not significant (t= 0.40, p> 0.05), meaning that the two groups are the same in terms of their vocabulary knowledge.

Table 6-Independent sample t-test for the group differences in vocabulary knowledge

	F	Sig	t	df	Sig(2-tailed)	Mean Difference
Vocab Pre-test Equal variances assumed	0.029	0.941	0.404	78	0.687	0.700

Hence, one can claim that the knowledge of vocabulary of the two groups was the same.

Grammar Pretest

one of the objectives of this study was to see if structural awareness would affect reading comprehension performance, in order to see whether the two groups were at the same level of grammar competence, this test had to be administered. Table 7 demonstrates the descriptive data of the grammar pre-test.

Table 7-Descriptive statistics of the grammar pretest

Groups	N	Mean	Std. Deviation	Std. Error Mean
Experimental	40	15.33	2.631	1.258
Control	40	15.28	2.621	1.516

The descriptive data of grammar pretest showed that the mean of EG (15.33) was very close to that of CG (15.28).

To check whether the difference was statistically meaningful or not, an independent t-test was run.

Table 8-Independent sample t-test for the group differences in grammar knowledge

	F	Sig	t	df	Sig(2-tailed)	Mean Difference
Vocab Pre-test Equal variances assumed	0.029	0.681	0.08	78	0.929	0.700

The results of the t-test showed in Table 8 indicated that there was no significant difference between the grammar knowledge of the two groups (t=0.08, p>0.05), meaning that both groups had a similar knowledge of grammar at the beginning of this study.

Strategy Use of the Participants at the Beginning of the Experiment

A strategy use questionnaire was given to the participants to see whether they were familiar with any of the strategies. The descriptive data is presented in Table 9 Higher values indicated more frequent use of strategies.

The results of the self-report questionnaire demonstrated that the mean of strategy use for the two groups was very close, which indicated that the

participants were similar in their use of strategies at the beginning of the study.

Table 9-Descriptive statistics for the strategies questionnaire

Groups	No. of Strategies	Minimum	Maximum	Mean	Std. Deviation
Experimental	40	2.20	2.97	15.33	2.631
Control	40	2.23	2.83	15.28	2.621

The results of the t-test also confirmed that the two groups were not significantly different.

Effect of Instructing Reading Comprehension Strategies

To see whether the instruction had any effect on the reading comprehension of EG participants, a reading comprehension posttest was administered. Table 10 below summarizes the descriptive data in this regard.

Table 10-Descriptive statistics for the performance of groups on the RC posttest

Groups	N	Mean	Std. Deviation	Std. Error Mean
Experimental	40	87.85	7.570	1.197
Control	40	79.75	9.588	1.516

The mean of EG (87.85) is obviously higher than that of CG (79.75). And there is also a noticeable difference in the standard deviation of CG (9.58) and EG (7.57). The standard deviation tells us the degree of dispersion in a distribution. The data reveals that the scores of the participants of EG are less dispersed.

In other words the participants of EG performed more homogeneously on the reading test than those of CG which is possibly a result of the treatment.

To compare the results more accurately an independent t-test was run as shown in Table 11.

Table 11- Independent sample t-test for the group differences in reading comprehension

	F	Sig	t	df	Sig(2-tailed)	Mean Difference
RC Post Equal variances assumed	0.233	0.036	4.19	78	0.000	8.10

As Table 11 indicates, there is a significant difference between the two means (t=4.19, p <0.05). In order to see whether the two methods of instruction have been effective within groups, the performance of each group at the beginning and the end of the experiment was compared too.

A matched t-test was first run to compare the results of EG at the beginning and at the end of the experiment. Table 12 shows the matched t-test of EG pre- and post-reading comprehension.

Table 12-Descriptive statistics of EG pre and post reading comprehension tests

Groups	N	Mean	Std. Deviation	Std. Error Mean
RC Pre	40	72.85	9.46	1.49
RC Post	40	87.85	7.57	1.19

As seen in the table, the standard deviation of the posttest is smaller than that of the pretest, the participants acted more homogeneously at the end of the experiment after the instruction.

Table 13-Matched t-test for EG reading comprehension pre and posttest

	Sig	t	df	Sig(2-tailed)	Mean Difference
RC Equal variances assumed	0.000	27.27	39	0.000	15

Result of a matched t-test comparing the reading comprehension performance of EG at the beginning and at the end of the experiment shoed that the participants of EG have performed significantly better on the posttest (t=27.27, p<0.001) as compared to the pretest, which means that the instruction has been effective in increasing the reading comprehension scores of the participants of EG. The effect size calculated to show the magnitude of the difference is 0.95, which is a very large effect size and shows that more than 90 percent of students did better on the post reading comprehension test because of the instruction. And for the control group (CG) we repeat these tests.

Table 14-Descriptive statistics of CG reading comprehension pre- and posttests

Groups	N	Mean	Std. Deviation	Std. Error Mean
CG Pre	40	72.80	9.29	1.46
CG Post	40	79.75	9.58	1.51

As the table illustrates, the participants of CG also did better on the posttest (79.75) compared to the pretest (72.80). However the standard deviation (9.29) reveals that the participants were less homogeneous.

Table 15-Results of matched t-test for the difference between CG's pre and post reading performance

	Sig	t	df	Sig(2-tailed)	Mean Difference
CG Equal variances assumed	0.012	16.89	39	0.000	6.95

The results show that the participants of CG also did significantly better on the posttest compared to the pretest (t=16.89, p< 0.001). The effect size also turned out to be large (0.8).This indicates that the NIC method of instruction is somehow efficient. Therefore, the NIC method of instruction proposed by Jack C. Richards in the teacher's book was also effective in increasing the students' reading comprehension ability. In fact, both groups did significantly better on the post test, compared to the pre-test; however, the results of Table 11 above show that the participants of EG still did significantly better on their reading comprehension posttest compared to the participants of CG. This, indeed, indicates that the explicit instruction of cognitive and metacognitive reading strategies and the students' structural awareness were significantly more effective than the NIC method.

Vocabulary Posttest

A vocabulary posttest was also administered at the end of the experiment to check whether the vocabulary knowledge of the participants was still at almost the same level and if it affected their performance on reading.

Table 16-Descriptive data of the vocabulary posttest

Groups (Voc. Post Test)	N	Mean	Std. Deviation	Std. Error Mean
Experimental	40	73.75	9.427	1.490
Control	40	73.05	9.618	1.521

As shown in Table 16, the mean of EG (73.75) is slightly higher than that of CG (73.05).An independent t-test was also run to compare the means of the vocabulary test of the two groups and The results revealed that there was no significant difference between the mean scores of the two groups in their vocabulary test at the end of the experiment. The results of this test rejected the possibility that the increase in the reading comprehension scores of the participants in EG had arisen from the higher vocabulary knowledge of the test takers.

Strategy use of the participants at the end of the experiment

The strategy use of the two groups was compared at the end of the experiment to see if instruction had any effect on their strategy use.

Table 17-Descriptive statistics of strategy use posttest

Groups	Minimum	Maximum	Mean	Std. Deviation
Experimental	2.25	3.02	2.64	0.198
Control	3.29	3.92	3.52	0.174

The mean of experimental group (3.52) is higher than the mean of the control group (2.57). An independent t-test was run to see if the difference was meaningful or not.

Table 18-Independent t-test for the difference between strategy use of EG and CG

Strategy use Pretest	F	Sig	t	df	Sig(2-tailed)	Mean Difference
Equal variances assumed	0.433	0.012	-1.34	19	0.000	-0.85

As shown in the table, EG participants' mean of strategies used is significantly higher compared to that of CG (t=1.34, p< 0.05); therefore, it can be stated that the explicit instruction of the cognitive and meta-cognitive reading strategies resulted in the significant increase of strategy use among the participants of EG and that is why they performed better on the reading posttest than CG.

Strategy Use Among EG Participants Comparing Highest and Lowest Scores

Among the participants of EG, the mean of strategy use of the half of the students with the highest scores in their reading comprehension performance (HG) were compared with the mean strategy use of the other half with the lowest scores on the RC posttest (LG). The descriptive data is presented in Table 19.

Table 19-Descriptive statistics of strategy use in HG and LG

	N	Mean	Std. Deviation	Std. Error Mean
HG	40	3.92	0.31	0.14
LG	40	2.48	0.45	0.21

The mean strategy use of HG (3.92) is noticeably higher than that of LG (2.48). Also the standard deviation of HG (.31) is smaller than the SD of LG (.45) which means that the participants of HG use strategies more homogenously than their counterparts in LG.

Table 20-Independent t-test for the effect of strategy use on RC between HG and LG participants

Difference between LG and HG	t	df	Sig(2-tailed)	Mean Difference	Mean	
					HG	LG
Total	-1.34	19	0.000	-0.85	3.92	2.48

Statistically speaking, the factor of mean strategy use as reported by the participants resulted in a significant difference HG and LG participants (p< 0.05). This result indicates that the mean of strategy use among EG participants can predict higher scores in their reading comprehension in a directional way, which is a higher mean of strategy use predicts a higher reading comprehension score.

The Effect of Structural Awareness on Reading Comprehension Performance

The reading comprehension posttest deliberately included questions that required participants to be aware of some structural rules to answer them. In the interview conducted at the end of the test, the participants were asked the reason they had chosen the answer. Surprisingly, neither the EG participants nor the CG participants mentioned any reason regarding the structures, but instead some participants indicated the nullification of other choices.

The results of the interview regarding structural awareness indicated that participants (both EG and CG) were not actively aware of the structural knowledge needed to answer the questions.

Results of the Verbal Protocol Analysis for Strategy Use

The participants of both groups were asked what had led them to choose their answers. The aim of this interview was to qualitatively indicate that the increase in the reading comprehension scores was due to the use of cognitive and meta-cognitive reading strategies and structural awareness.

The participants of CG mainly reported that they had chosen the answer according to the meaning of the sentences and crossing out wrong choices. Some

reported that they had no reason or they felt the correct answer was what they had chosen because it sounded more natural, some even said they merely guessed the correct choice. The participants of EG had various reasons for selecting their choices which were in line with the strategies taught in their classes, Among the participants who had a higher strategy use compared with the average strategy use reported at the beginning of the study (presented in table 9), a greater percentage belonged to EG (EG= 70.2 %, CG= 29.8%).

Discussion

Due to the fact that reading comprehension is a very important skill in learning a second/foreign language, and owing to the fact that strategy instruction is a quite new concept in language learning and teaching, the present study attempted to investigate the effects of explicit teaching of cognitive and metacognitive reading strategies and structural awareness on reading comprehension in Elementary levels among adult female learners of English. It was also intended to find out whether there was any difference between the average strategies used by more successful and less successful readers among the participants of EG (as indicated by their scores on the reading comprehension test).

The findings indicated that the explicit instruction of cognitive and metacognitive reading strategies positively increased the scores of the students in their reading comprehension. They also showed that although it was statistically insignificant, more proficient students had a higher mean of strategy use compared to less proficient participants.

Regarding the effect of structural awareness on the reading comprehension, it should be noted that the participants of the EG did not obtain higher scores in their grammar posttest (Mean: 18.22) compared to the CG (Mean: 18.18), the difference was not statistically different (sig.: 0.12, t= 3.09, p>0.05). The interpretation of this result can be two-folded: on the one hand it can be said that structural awareness does not significantly increase the reading comprehension ability as shown in the results and discussed in the verbal protocol analysis; on the other hand, considering the few number of grammar points present in elementary levels, and according to the noticeable (but statistically insignificant) increase in the scores of the participants of the EG, structural awareness could have been said to play a role in reading comprehension in elementary levels.

Considering the role of strategy use in reading comprehension, one can say that the participants who were treated with the explicit teaching of cognitive and meta-cognitive reading strategies(EG), demonstrated a significantly higher score in their reading comprehension compared to those who were simply taught using the conventional method of instruction (sig.: 0.03, t= 4.19, p<0.05).

Vocabulary knowledge of the participants was also examined at the end of the experiment to make sure that the increase was not resulted from higher vocabulary knowledge, and the findings demonstrated that the vocabulary did not have any significant role (sig. 0.86, t=0.32, p>0.05) in the increase of the reading comprehension scores.

As revealed by the results, explicit instruction of cognitive and meta-cognitive reading strategies had a significant influence on reading comprehension scores. At this point, to answer the second research question, the strategy use of ten participants with the highest scores (High Group: HG) were compared to that of ten participants with the lowest scores (Low Group: LG) among EG participants. Although all the twenty selected participants showed a greater number of strategy use compared to the participant of the CG, there was a noticeable difference of the number of strategies used between the test-takers in HG and LG; that is the participants in HG had a significantly higher mean of strategy use compared to the participants of the LG.

Conclusions

The findings of the present study can be summarized as follows:

Firstly, the results indicated that there was a statistically significant difference between the participants who were taught the reading comprehension strategies explicitly as compared to those who were taught implicitly in their reading comprehension scores.

Secondly, raising structural awareness in EG, did not yield a significantly higher grammar knowledge, implying that grammar could be taught using the NIC method.

Thirdly, a comparison of EG participants who had the highest scores with the ones who obtained the lowest scores revealed that a higher mean of strategy use predicts a higher reading comprehension score, which is in line with many of previous research (e.g. Ku 1995; Park 1997).

Finally, the interview with some of the participants after their reading comprehension posttest showed that EG participants were consciously aware of reading comprehension strategies and were actually using the strategies; however, CG participants were not consciously aware of the strategies, or did not know what strategy they could use to answer certain questions. This interview reinforced the effectiveness of explicit teaching of cognitive and meta-cognitive reading comprehension strategies in elementary Persian EFL learners.

Suggestions for Further Research

The data of the present study was collected from female adult students studying New Interchange Series in elementary levels. Future studies can investigate the effects of cognitive and metacognitive reading strategies and structural awareness on reading comprehension among males and females.

Another area of interest can be the educational background of the participants. Do participants of higher education use the strategies more than the ones with lower education? Should they be taught the strategies differently?

Age is also an important factor in language learning. So it should be investigated whether explicit instruction of cognitive and meta-cognitive strategies and structural awareness are also useful in children and young adults learning English.

Last but not least, the effects of cognitive and metacognitive strategies in other skills (i.e. speaking, listening and writing) can also be investigated. Other strategies (e.g. social strategies, affective strategies) might also play a role in learning English as a foreign language. The significance of these roles can also be studied.

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