



The Impact of a Strategies-Based Instruction on Iranian EAP Students' Reading Strategy Use: Developing Strategic EAP Readers

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Abstract

Underperformance of students in EAP reading comprehension has been an issue of concern for teachers, syllabus designers, and curriculum developers in general and for EAP practitioners in particular. In spite of the fact that considerable efforts have been made to improve reading comprehension of students through strategies instruction over past decades, EAP students however have not benefited much from learning strategies. Thus, this study intended to investigate the impact of a Strategies-Based Instruction (SBI) on undergraduate students' reading strategy use in an EAP context. Taking an instructional model from strategies taxonomy of Oxford (1990; 2001), it was assumed that in contrast to conventional EAP reading methods, SBI would be more effective in encouraging reading strategy use and as a result developing reading comprehension of EAP students through encouraging the use of effective strategies and skills. To do so, 80 freshman undergraduate students were chosen as the participants of this study who were in two intact classes. After administration of a pre-test, treatment (22 sessions, 2 sessions per week), and a post-test, the collected data was analyzed using t-test to examine the effect of the proposed method of instruction. The results of the analysis showed that the teaching intervention had a significant effect on students' reading strategy use. The findings have implications for teachers encouraging effective reading comprehension instruction through the use of strategies in EAP teaching contexts.

Keywords: Strategies-based instruction; EAP; learning strategies; reading strategies; reading comprehension

1. Introduction

Research in reading comprehension has highlighted the methods of teaching English learners to implement a variety of strategies in order to read better. Recently, a considerable attention in second and foreign language reading research has been given to strategies instruction (Bahmani, 2009). Reading strategies and skills are appealing since they indicate how readers coordinate their interaction with written text and the way these strategies and skills assist text comprehension. Reading strategies can be explained as how readers interact with a task, how they obtain meaning from what they read and what they do when reading comprehension is difficult. At the same time, reading skills are utilized within reading strategies context. In fact, strategies tend to reduce demands of working memory through easing comprehension process (Hudson, 2007).

There has been a great body of research on reading and reading instruction which has brought about remarkable developments in first language contexts particularly in instructional techniques to train strategic readers; however, in second or foreign language contexts, it has not made as much progress (Grabe & Stoller, 2002; Hudson, 2007). This is partly because of the fact that a variety of distinct contexts exist for second and foreign language reading instruction that no set of research findings can be assumed to be utilized similarly to all of them (Hudson, 2007). In addition, according

to Grabe and Stoller (2002), less research support and limitations in conducting long-term research studies, lack of continuous and adequate practice to develop reading skill also bring about barriers in second language reading studies.

Notably, reading has been considered as the most important skill for second and foreign language learning in tertiary educational settings (Dheib-Henia, 2003; Pritchard and Nasr, 2004; Huang, 2006; Rahmani, 2009; Bahmani, 2009; Akkakoson, 2012). Undoubtedly, it is through reading that knowledge is transferred and students can gain information about professional written texts and discourse in their specific fields of study (Pritchard and Nasr, 2004). However, in higher education institutes of many Asian countries where English for Academic Purposes (EAP) is taught as a compulsory course subject to undergraduate students of different fields of studies who find reading as their most required EAP skill (Huang, 2006; Moslemi, Moinszadeh, and Dabaghi, 2011), many students, being either second or foreign language learners of English (ESL/EFL), yet are faced with underperformance in reading comprehension (Huang 2006, Phakiti, 2006, Pritchard and Nasr, 2004).

In a similar vein, the reading comprehension problem exists in EAP context of Iran in which the main objective of EAP courses is developing reading comprehension of students to read academic texts in their specialty area (Hayati, 2008; Farhadi, Sajadi Hezaveh, and Hedayati, 2010; Erfani, Iranmehr, and Davari, 2010). Although remarkable educational and financial investments have been made on EAP programs, the majority of students cannot accomplish improving their reading comprehension in EAP classes (Eslami, 2010). Among many influential factors leading to inefficiency of EAP courses, teaching methodology is of a great concern. As stated by Behroozzad, Nambiar and Amir (2012), language classes in Iran are commonly instructed through traditional approaches including translation, repetition, and memorization of the courses. Similarly, EAP classes lack skillful and innovative teachers who can implement communicative approaches in the classroom (Hayati, 2008). As pointed out in the literature, traditional Grammar-Translation Method (GTM), which is an outdated and inefficient method in improving reading comprehension of students, is still the main methodology practiced in EAP contexts (Pritchard and Nasr, 2004; Hayati, 2008; Mazdayasna and Tahririan, 2008; Ajideh, 2009; Erfani et al., 2010; Farhady et al., 2010; Atai, 2011). As a result, students are still lagging behind and underperformance in reading comprehension test performance is a challenging problem existing among Iranian undergraduate students.

Therefore, this study has significant contributions for curriculum developers, syllabus designers, teachers and learners involved in EAP contexts particularly in EFL situations who are attempting to upgrade the current status of EAP learning in tertiary educational contexts. As a proposed approach, strategies-based instruction can elicit more attention to the development of reading comprehension through strategies use and students improvement in terms of effective EAP courses and encourage innovative teaching methods.

1.1 Literature Review

Since the outset of post-method period, TESOL methodology experienced some considerable amendments; however, such modifications have seldom been implemented in ESP contexts. Few studies have focused on the significance of EAP teaching methodologies and the need for fundamental changes of instructional approaches in an attempt to develop reading comprehension and more specifically reading strategies of EAP students. To provide an adequate foundation and background for the current research, some recent studies conducted in the realm of EAP and reading strategies are reviewed in this section.

In a study by Ajideh (2009), he aimed to present the influential role of teaching methodology and learning strategies as a result of teaching and curriculum reform in his article. He intended to highlight the differences between ESP and general English study through stating that although choosing language specification and teaching content is necessary for ESP course, instruction on learning strategies which leads to autonomous learning should be considered as fundamental for ESP course. Ajideh (2009) mentioned that the advent of ESP coincided with the introduction of communicative language teaching supporting a practical view toward learning English. Then, he criticized the two language use models of ESP proposed by Widdowson (1983) suggesting that ESP should be considered as an approach not a product which provides a certain methodology and material, but it should focus on language learning and learner needs as stated by Hutchinson and Waters (1987). Ultimately, he concluded that there should be a great effort to foster learning autonomy in ESP courses in Iranian academic teaching context. In this regard, teaching learning strategies, particularly metacognitive strategies, should play an important role in ESP classes to promote learning autonomy.

Similarly, Hayati and Jalilifar (2010) investigated the impact of reading skills instruction through implementing TBLT on EAP learners' reading comprehension. To do so, they selected 42 MBA students and randomly assigned them to experimental and control groups as participants. Four reading skills including, scanning, skimming, contextual clues, and critical reading were taught through task-based language teaching to the experimental class, whereas the common translation method was taught to the control group. Then, they examined the participants' reading micro-skills at the end of instruction period using t-test formula. The findings represented that the learners in the experimental group who received reading skills instruction through TBLT performed better than the students of the control group demonstrating a higher academic performance and successful reading comprehension.

As another attempt to develop reading comprehension of EAP students, Iranmehr, Erfani, and Davari (2011) also explored the effect of Task-Based Language Teaching (TBLT) on reading comprehension of EAP learners. They assumed that TBLT can bring about better learning conditions for EAP learners since it encompasses the use of language concentrating on the outcome of the activity rather than the language used to achieve that outcome. Furthermore, criticizing the running inefficient instruction methods common in Iranian ESP context, they intended to

conduct a study to investigate the influence of TBLT as an alternative instead of commonly applied method called Grammar Translation Method (GTM) on reading comprehension of Iranian EAP students majoring in chemistry at two universities of Iran. To this end, they chose two homogeneous groups as the experimental and control groups at each university as the participants of their study. The students in the control groups were supposed to read the texts, translate them into Persian, and answer some traditional forms of reading comprehension questions; however, learners in the experimental groups studied the same texts but with task-based instruction and they were supposed to complete the exercises given in Willis' TBLT framework. Then, after a pre-test-treatment-post-test procedure, t-test was utilized to examine the impact of TBLT on students' performances. The findings displayed that it is advantageous to practice TBLT as an effective approach in EAP instruction context in order to improve reading comprehension of students.

As another recent study in strategies-based instruction sub-field, Aghaie and Zhang (2012) examined the effect of direct reading strategies instruction on Iranian EFL students' reading performance taking a quasi-experimental design with a control group and a treatment group. They exploited Chamot and O'Malley's (1994) cognitive and metacognitive strategies taxonomy. Following a strategy-based instruction for four months, the t-tests results revealed a significant improvement in the reading comprehension and reading strategy use of the students in the treatment group. In addition, the findings indicated that teaching of strategies developed autonomous reading behaviors of learners.

In conclusion, the current study highlighted the role of teaching methodology in EAP contexts and added to the previous body of research on EAP instruction as an attempt to improve the current reading comprehension problem of EAP learners in Iranian EFL context. To this end, it examined how the proposed intervention called strategies-based instruction can influence reading comprehension of EAP students in Iranian tertiary education context through encouraging their strategy use. In doing so, the following research question was formulated to serve the objective pursued in this study:

RQ: To what extent does strategies-based instruction affect Iranian EAP students' reading strategy use?

2. Method

The current research adopted an experimental pre-test post-test control group design to explore whether a strategies-based instruction has any significant effect on EAP students' reading strategy use. To do so, two EAP classes were chosen out of 20 available classes from a governmental university through cluster random sampling. Then, they were randomly assigned to be a control group or an experimental group.

2.1 Participants

The participants of this study were 80 freshmen undergraduate students of engineering studying at Urmia University of Technology which formed two intact classes of 40 students and were randomly assigned to the experimental group and control group. They were homogeneous in terms of their age range (18-20), university entrance exam English score, and English background measured by means of a background information questionnaire. In addition, the two groups had almost similar mean scores in their initial reading strategy use assessed as the pre-test through the strategy use questionnaire prior to the experiment. To make sure the equivalence and comparability of the pairs, extreme scores were discarded from the sample.

2.2 Instruments

Two instruments were utilized in this study for data collection. A brief description of these instruments is given in the following:

A background information questionnaire adapted from Mackay and Gass (2005) was employed to select homogeneous participants and control as many intervening variables as possible. It was believed that a rigorous control of variables such as attitudes, age, language proficiency, and English language experience in the language learning contexts should be made to get more generalizable findings as much as possible.

Furthermore, a self-report Likert-scale items questionnaire was utilized in this study to examine the effect of instruction on reading strategy use of EAP students after implementation of the treatment. Oxford's (1990) *Strategies Inventory for Language Learning* (SILL) was adapted for the development of the questionnaire because of its wide use and proven reliability in ESL/EFL strategy studies in Asia (Lee, 2007; Sun, 2011). The questionnaire included 24 Likert-scale items. It was given to the students at the beginning of the study as a pre-test and at the end of the study as a post-test. To ensure the appropriateness of the questionnaire, its reliability and validity was measured prior to the study. The reliability result of the questionnaire using Cronbach's alpha formula revealed an acceptable range ($r=0.82$). In addition, the content validity of the questionnaire was also checked and confirmed by three experts in the field.

In addition, for the implementation of strategies-based instruction as the treatment, the book '*Select Readings*' 2nd Edition written by Linda Lee, Erik Gundersen, and Jean Bernard (2011) and published by OUP was used. This four-level American English reading course uses carefully selected and high interest reading texts to empower students read effectively. It contains a range of exercises before and after reading aiming at developing reading skills, examining comprehension and improving vocabulary knowledge.

2.3 Procedure

The participants formed two EAP classes that were held two sessions (approximately 90 minutes) a week. The experimental class was taught through a strategies-based instruction while the control group only received the traditional reading method (GTM) for 22 sessions. All the data was collected during an academic semester in almost 4 months. In the beginning, the background questionnaire was given to the learners to ensure the homogeneity of the participants and control the intervening variables as much as possible. In addition, reading strategy use questionnaire

was administered as the pre-test in order to examine students' strategy use before the treatment. Then, the treatment was implemented.

The treatment involved a strategies-based method of EAP reading instruction which takes into account knowledge and instruction of reading strategies in an attempt to empower learners to reach their desired target defined as successful reading comprehension in the curriculum. This research aimed to see if such a method can affect students' reading strategy use and make strategic EAP readers at the end of the course.

In order to provide learners with certain reading strategies required during reading comprehension, reading strategies, driven from Oxford (1990; 2001), were instructed as effective tools to develop strategic and successful readers. The teacher devoted the first session of the class to introducing and teaching the reading strategies. Then, he tried to point out the important role of these strategies and skills in dealing with different types of academic English texts. Finally, he modeled a number of reading strategies, including skimming and scanning, summarizing, note taking, inferencing, organizing, guessing meaning, using clues, and identifying text organization and guided the students to utilize them. Simultaneously, the teacher considered learners' interest and emotions during the instruction as the principles of learning-centered approach. He tried to keep the students' interest in the course through some techniques such as applying pair work and group work, giving students' time to think, emphasizing more on process rather than product. In addition, following the principles of learning-centered approach of ESP instruction as proposed by Hutchinson and Waters (1987) and Jordan's EAP (1997), the teacher took into account learners' existing knowledge and skills since these learners had already a high proficiency in their native language, thus, their knowledge in their native language was utilized to make them improve in EAP reading comprehension. Furthermore, considering learners' interests as another influential factor, whenever students felt bored, the instruction was stopped for a while, and depending on the syllabus, it was ended or resumed after a short break.

3. Findings

Prior to carrying out statistical analysis for the post-test data, both the descriptive and inferential analyses were carried out for the data obtained from the pre-test reading strategy use scores of the two groups in order to make sure whether the two groups were homogeneous. After ensuring the comparability of the two groups based on the pre-test results, descriptive statistics as well as inferential statistics were conducted for the post-test scores on the two groups. Table 1 displays the descriptive statistics' results for the pre-test and post-test reading strategy use administered to both the experimental and control groups before and after the treatment.

Table 1. Descriptive statistics of the reading strategy use scores

Group	Test	N	Min	Max	Mean	SD
Experimental	Pre-test	40	27	93	58.82	17.17
	Post-test	40	42	98	71.12	14.98
Control	Pre-test	40	32	95	59.90	15.87
	Post-test	40	32	97	60.87	15.81

As it can be observed in Table 1, the two groups had almost similar scores on their reading strategy use in the pre-test. However, according to the post-test scores, the two groups had different reading strategy use. Figure 1 shows the change in the mean scores of each group from the pre-test to the post-test.

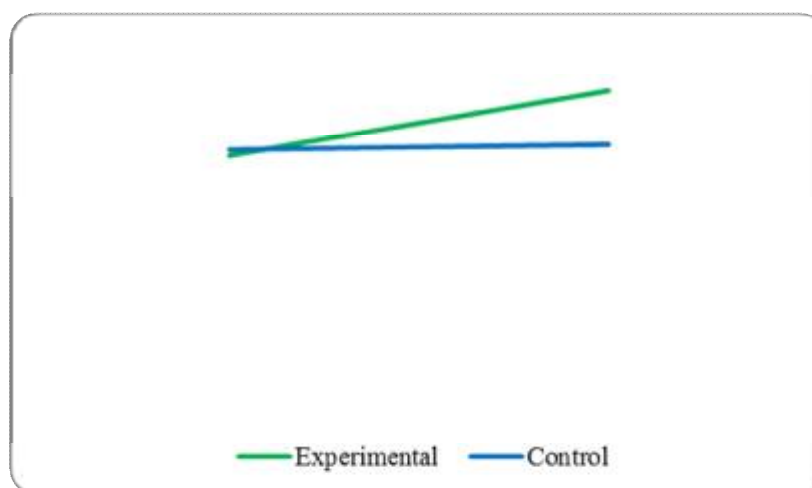


Figure 1. Reading Strategy Use Mean of the Groups

It should be emphasized that, according to the descriptive analysis of reading strategy use, the difference in the mean scores between the experimental and control group in the pre-test is very small, however, this difference is considerable

in the post-test and needs to be examined whether it is significant or not. Ultimately, to determine the significance of this difference, inferential statistical analysis was again performed.

Having ensured the homogeneity of the two groups in terms of reading strategy use, the independent-samples t-test was employed to compare the means scores between the experimental and control group and the paired-samples t-test was further conducted to compare the pre-test and post-test scores within each group intending to examine if any change had taken place in students' reading strategies use at the end of the course.

Notably, the result of the independent-samples t-test conducted to compare the experimental and control group on their strategy use after the implementation of the treatment demonstrated a significant difference between the two groups ($t(78)=2.97, p=.00$). It was displayed that the experimental group had a significant improvement in their scores ($M=71.12, SD=14.98$); however, the control group did not turn out to have any significant increase in their scores ($M=60.87, SD=15.81$). Table 2 shows the results of the independent-samples t-test conducted on the post-test reading strategy use scores of the two groups.

Table 2. Independent-samples *t* test for the post-test reading strategy use

Group	N	Mean	SD	t	df	P
Experimental	40	71.12	14.98	2.97	78	.00
Control	40	60.87	15.81			

Furthermore, paired-samples t-test was used to make comparisons within each respective group measuring the impact of the intervention on the students' scores. The results summarized in Table 3 revealed a significant increase in the reading strategy use scores of the experimental group from the pre-test ($M=58.82, SD=17.17$) to the post-test ($M=71.12, SD=14.98, t(39)=-5.62, p=.00$). On the other hand, the paired-samples t-test indicated no significant increase in the reading strategy use scores of the control group before ($M=59.90, SD=15.87$) and after ($M=60.87, SD=15.81, t(39)=.42, p=.67$) being taught with the common traditional method. Therefore, it can be implied that the experimental group had a considerable development in their use of reading strategies because of receiving strategies-based EAP instruction and that the change in the experimental group's scores did not occur by chance. Table 3 shows the results of the paired-samples t-test for the two groups.

Table 3. Paired-samples *t* test for the reading strategy use scores

Group	Time	N	Mean	SD	t	df	P
Experimental	Pre-test	40	58.82	17.17	-5.62	39	.00
	Post-test		71.12	14.98			
Control	Pre-test	40	59.90	15.87	-.42	39	.67
	Post-test		60.87	15.81			

As seen in Table 3, the experimental group's mean score ($M=71.12$) is significantly higher than the mean of the control group ($M=60.87$) in the post-test. Thus, it can be inferred that the improvement in the reading strategy use mean scores of the experimental group was to a large extent and it was caused because of the independent variable's impact.

Ultimately, to check for the effect size of the independent variable, namely, strategies-based EAP instruction on the dependent variable, namely, reading strategy use, the effect size statistic was conducted which is usually assessed by eta squared. Mainly, eta squared amounts can be divided into three effect sizes: .01 for small effect, .06 for average effect, and .14 for large effect given by Cohen (1988, cited in Pallant, 2005).

The effect size calculation using eta squared turned out to be number .10 indicating nearly a large variance brought about by the independent variable (i.e. strategy based EAP instruction). Otherwise stated, the eta squared showed that 10 percent of the variance in reading strategy use was caused by the instruction. Moreover, the eta squared estimation to assess the effect size of the instruction within the experimental group for paired-samples t-test revealed a very large effect ($d=.44$). In conclusion, it can be implied that the strategies-based instruction explained a very large amount of variation in reading strategy use scores of the students. In other words, the eta squared .44 demonstrated that 44 percent of the change and variation in the reading strategy use as the dependent variable is explainable by the manipulation of the treatment, namely, strategies-based EAP instruction as the independent variable in the experimental group.

In sum, Iranian undergraduate students who receive strategies-based EAP instruction show a considerable improvement in their reading strategy use in contrast to their peers who receive conventional reading instruction. Additionally, the students who are taught through traditional reading instruction are not likely to improve in their reading strategy use since they do not receive any instruction on strategies which, in turn, leads to their unfamiliarity of reading strategies and finally inability to use them in reading comprehension tasks.

4. Discussion and Conclusion

The findings support the idea proposed by Carrell (1996, 1998) stating that successful use of a reading strategy depends on the knowledge of how to implement that strategy which was provided through a strategies-based instruction in this study. In other words, successful strategy users are both aware and flexible in the use of different reading strategies needed to accomplish a task. This study is in line with the previous studies conducted over 20 years asserting that learning strategies improve college students' language skills particularly their reading skill helping them to improve in their reading tasks (Chamot & Kupper, 1989; O'Malley & Chamot, 1990; Taraban, et al., 2004; Phakiti, 2006; Cubukcu, 2008; Ajideh, 2009; Bahmani, 2009; Hayati & Jalilifar, 2010; Sun, 2011; Motallebzadeh & Mamdoohi, 2011; Aghaei & Zhang, 2012). The findings also confirm the fact that there is a distinction between successful and unsuccessful readers maintaining that successful readers are able to employ the strategies more efficient and frequent than less successful ones as stated by Block (1986). Thus, having stated the role of strategy use in reading comprehension, the significance of a strategies-based instruction can be justified in an attempt to make strategic EAP readers.

It can be concluded that when students are exposed to reading strategies instruction, they become aware of the strategies and techniques that can be used in understanding the reading texts better and they can view the passage as a whole unit in which knowledge of the parts can be gained through considering the preceding and following sections of the text. They can also learn that problem in understanding part of a passage can be compensated by the knowledge of other related sections in the text and using surrounding texts to guess the meaning. Having achieved an awareness of reading strategies, students can have a better command of a variety of techniques they can use for a successful and full reading comprehension by practice.

Therefore, the strategies-based approach proposed in the present study compensates for some of the weaknesses of the Iranian undergraduates in EAP reading comprehension. It helps the students to quit their traditional ways of reliance on grammatical structures and vocabulary in reading comprehension considering the whole text more important than its parts. In addition, the proposed intervention helps teachers provide learners with the explicit instruction of strategies in an attempt to enable them overcome reading comprehension difficulties and become strategic readers. Finally, it integrates reading strategies instruction with a learning-centered EAP approach, which takes into account the learners' interests and attitudes in their learning process making use of their existing abilities, to strengthen the learners to gain the maximum benefit for improving their reading comprehension.

On the other hand, this study supports the idea that ESP is more concerned with practice and methodology than theory and syllabus design (Hutchinson & Waters, 1987; Watson Todd, 2003) restating that a strategies-based instruction can contribute to a shift in EAP teaching paradigm in different ways: from teacher-centered language-based EAP to learner-oriented EAP and from grammatical analysis and translation of a text to implementing knowledge of reading strategies and skills to comprehend the text. Through the strategies-based instruction, teachers can identify students' weaknesses in reading comprehension and try to make the necessary efforts to solve the problems as much as possible. Teachers can figure out whether or not the students utilize strategies in reading comprehension and also discover which aspects of reading comprehension are challenging for the learners or which sections are not fully considered by them. Then, they can emphasize that successful reading comprehension would not take place unless some appropriate techniques and strategies are considered and implemented systematically.

It is also worth mentioning that, based on the findings of the present study, adequate time is required to develop discipline specific reading skills and encourage content reading aiming to make students ready for reading independently. Furthermore, the truth is that a majority of our students in EFL contexts come from a teacher-centered learning background where it is thought that grammar translation language teaching results in rapid learning outcomes in EFL classrooms. However, teaching strategies is time consuming for a teacher who needs to take more time and effort in preparing, processing, and monitoring the instruction. Therefore, learners require adequate assistance to change their status from being fully dependent on the teacher, as it was in the rigid teacher-dominant classroom style, to the state of independence in the target language reading matching to the principles of the learning-centered strategies-based instruction. To reach this end which is expressed as *learner autonomy*, reading techniques should be introduced first to students; in addition, they should be provided with sufficient and appropriate opportunities to work on these techniques and have a good command of their use which are beneficial for success in reading comprehension.

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