The Effect of Iranian EFL Learners' Self-generated vs. Group-generated Text-based Questions on their Reading Comprehension

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Abstract

Reading comprehension is one of the most important skills, especially in the EFL context. One way to improve reading comprehension is through strategy use. The present study aimed at investigating the effect of question-generation strategy on learners' reading comprehension. The participants in the study were 63 intermediate students from three intact groups in Resa institute in Boukan, They were randomly assigned to two experimental and one control groups. They were given two samples of the reading section of the standardized Preliminary English Test (PET) as the pre- and post-tests. The students in the experimental group A generated text-based reading comprehension questions individually, and in the experimental group B in groups of three but the learners in the control group answered the reading comprehension questions provided in the text. The results of ANOVA revealed that the students in the experimental group B, who employed group-question generation strategy, outperformed the experimental group A, who employed individual- question generation strategy and the control group in the reading comprehension post-test. The findings can have some implications for EFL teachers and syllabus designers.

Keywords: Reading Comprehension, Question- Generation Strategy

Introduction

A primary function of language is for humans to convey information to each other or request services of some kind in a variety of situations for example relating events that happen to them, giving someone directions, and asking for services such as in a shopping or other service encounter (Armstrong & Ferguson, 2010). Reading comprehension is the process of constructing meaning through interaction with the written text; this process of interaction with the text, as stated by McNamara and Magliano (2009), is a function of both reader and text variables taking place in a larger social context. Comprehension is the essence of reading and the active process of constructing meaning from the text (Durkin, 1993). This is also emphasized byVan den Broek and Espin (2012) who argue that reading comprehension is a complex interaction among automatic and strategic cognitive processes that enables the reader to create a mental representation of the text.

Reading is one of the language skills which has a very complex process. It is a fundamental and indispensable skill for foreign language learners since most of the target language sources are provided in written form. When we read something, we try to understand the author's intended meaning. While reading, we face with two layers of reality: One that we can see and one that we cannot see; the purpose is to make the invisible layer and its meaning visible and clear (Kose, 2006). In other words, meaning is not inherent in texts, rather texts have the potential for meaning (Widdowson, 1984). So, reading is not a simple process of getting the meaning of printed words or just decoding words. Linse (2005, p. 69) stated that "reading is a set of skills that involves making sense and deriving meaning from the printed word". Anderson (2003) mentioned that the goal of reading is comprehension. So, when students read, they need to process information and focus on comprehension.

Many students may think that the intended meaning of the author lies solely in the printed words, and that reading is no more than a process of obtaining meaning from the source. A foreign language student who says "I can read words and decode them but I can't integrate the meaning of separate words" is not, therefore, reading, but, just decoding the written symbols. Such language learners appear to approach reading passively,

relying just on the use of a bilingual dictionary, thereby, spending hours laboring over direct sentence-by-sentence translations. Decoding is an important part of reading but it is not an end rather a prerequisite to comprehension. Since reading is a complex cognitive process, it is very important for teachers to help students to take active control of their own comprehension processes Therefore, the ability to read English effectively is perceived as an essential tool for professional success, and personal development.

Habibian and Samsilah Roslan (2014) consider reading comprehension as a process that involves learner's conscious cognitive efforts. It involves a concern about what is read, and what information is already known in line with the reading purpose. It is the cognitive approach that enables the learner to shape and direct the cognitive progress.

All these indicate the students' need to master reading ability and acquire reading efficiency because good reading ability is the key to success in English courses in an academic environment. In short, the ability in reading comprehension will empower students to move ahead and contribute positively to educational success. In particular, college students have to learn a large amount of information from English texts. Reading and comprehending this amount of information could be very demanding. Recently, there have been many attempts and research to improve the situation for reading comprehension. Antoniou and Souvignier (2007) maintain that "effective reading requires the use of strategies that are explicitly taught"(p. 45). Skillful readers try to comprehend the reading text and when this does not happen, they use and apply strategies to understand and comprehend the text (Pardo, 2004).

According to Barnett (1988), reading strategies are referred to as mental processes which readers use when they read a text and try to understand it effectively. In fact, they show how readers conceive a task, what textual cues readers attend to, how they make sense of what they read, and what they do when they do not understand. The first purpose for which a reader makes an effort is comprehension or understanding. Coiro (2003) defines reading as the process of discovering and putting together meaning simultaneously as a reader is involved with the text, which causes a

complicated relationship of ideas, experience, evaluation and utilization of ideas.

Reading comprehension is composed of two associated processes including word recognition and comprehension. As Nunan (2003) noted word recognition refers to the process of perceiving how written symbols fit to one's spoken language. In addition, comprehension is the process of making sense of words, sentences and connected text. The readers usually use such cases as background knowledge, vocabulary, grammatical knowledge, experience with text and other strategies in order to help them understand written text. Grammar and vocabulary are two components that cannot be set apart in comprehending a text.

According to Serravallo (2010) reading is thinking, understanding and getting at the meaning inferred from a text. He provides an elaboration that reading must be directed toward the understanding and getting the idea that the text creates. The learners think about what they already know about structure of the text before reading; they make relationships with their live and the world when they read. Reading is an important language skill which does not only provide the ability to acquire new information but also obtains new language skills (Carell, 1998).

Miciano (2002) considered self-questioning to be a reading strategy to help Filipinos second language learners enhance and develop their comprehension of reading passage in English. Then, the researcher administered a pretest and post-test to compare two groups of the learners participated in the study. The two groups of the learners were assigned to one control group and one experimental group. Both groups (i.e., the experimental and control group) took the same test in the pre-test and post-test. The result of the study demonstrated that self-questioning did not have a significant effect on comprehension of a reading passage in English.

Additionally, Khansir and Gholami Dashti (2014) investigated the effect of question-generation strategy on Iranian EFL third grade high school students' ability in reading comprehension. One hundred and twenty male and female students were assigned to two experimental groups, each group consisting of 30 homogeneous students and two control groups. The two experimental groups of the students were instructed for 10 weeks. During

the treatment, the researcher modeled the question- generation strategies and explained the learners to make questions based on the reading texts. The results of the study showed that question-generation strategy had significant impact on the Iranian EFL third grade high school learners' reading comprehension.

Weinstein, McDermott, and Roediger (2010) also conducted a research through which they provided participants with comprehension questions that other learners had previously generated as prompts to guide the kinds of questions that the participants should generate and answer during their own reading. This self-questioning and answering group demonstrated better memory for the information in the texts than did a group who reread the texts.

Within an EFL context, reading comprehension is an inseparable part of teaching and as Mirhassani and Farhady (2012) put it, the most important and irreplaceable skill in language learning. For EFL learners, reading comprehension is one of the most important skills of a language. Richards and Renandya (2002) believe that in many second or foreign language teaching situations, reading receives a special focus. In EFL context, since learners have less access to language interactions and students are rarely required to communicate in English language, most of the English classes at the high schools are held in Persian. Even in English classes at language centers, most of the interactions are done in Persian. Thus, in EFL contexts, as English is not the medium of instruction, receiving information on a variety of topics is virtually dependent upon having a good reading proficiency in English.

In Iran, English is used as a foreign language and it is obvious that learners spend their time learning from textbooks at high schools and at university or at some English institutes. In fact, EFL learners in general, and Iranian EFL learners in particular, receive little amount of listening input and for them reading is the skill of utmost importance. On the other hand, question- generation strategy is believed to help readers comprehend complex reading demands. Some scholars (e.g., Harvey & Goudvis, 2000; Look, 2011)state that readers can more actively comprehend a text, and monitor their comprehension through the process of question-generation strategy. So, following the same line, the current study aims to detect the

effect of learners' self-generated vs. group-generated text-based questions on their reading comprehension. To this end, the following research question was posed:

> Is there a significant difference on the effect of group-question-generation strategy, individual-question-generation strategy, and no question-generation strategy on Iranian EFL learners' reading comprehension?

And accordingly, the following null hypothesis was formulated:

> There is no significant difference on the effect of group-question-generation strategy, individual-question-generation strategy, and no question-generation strategy on Iranian EFL learners' reading comprehension.

Method

Participants

Eighty Iranian intermediate female students from Resa English Language institute in Boukan participated in this study. Their age range was between 16 and 18. The students' native language was kurdish and their foreign language was English. They studied English for about 3 hours, in two sessions, per week in the institute. The participants were in three intact classes at the intermediate level in the institute. Yet, in order to make sure about their homogeneity in terms of their English language proficiency, the researcher administered the standardized Preliminary English Test (PET). Due to practical issues, only the reading and writing subtests of PET were administered. The participants whose scores were one standard deviation above or below the mean were selected; The rest of the students were excluded from further analyses. Thus, the number of the participants decreased to 63.Then, the participants were randomly assigned to two experimental groups and one control group. The number of participants in each group was 21. The means of the participants' scores on these two subtests were considered as their language proficiency scores. The scores of the reading subtest of the same Test (PET) were considered as the students' pretest scores in the experimental and control groups.

Instrumentation

A Standard English Language proficiency test (PET) was used to test the students' language proficiency level. incorporate all four language skill (reading, writing, listening and speaking). Due to practical issues, just the reading and writing subtests of the test were administered to check the homogeneity of the participants in terms of these two skills. The scores to the same reading subtest of PET were considered as the pretest scores of the participants in both experimental and control groups. Also, another sample of reading test from PET was administered as the post- test to the participants in both experimental and control groups. The reliability of both pre- and post-tests was calculated through Cornbach alpha formula.

Procedure

After administrating the PET test, in the next session, the researcher modeled the question-generation strategy for both experimental groups and explained the learners to make questions based on the text they read. The teacher/ researcher spent four sessions teaching the strategies needed to generate questions. In the first two sessions, the researcher taught learners to use procedural prompts which is a kind of scaffolding and supply the learners with specific suggestions and make the task easier to do. Then, the learners could rely on them to generate questions (Scardamalia& Bereiter, 1985). Two specific procedural prompts were implemented to provide scaffolding: *signal words* and the *main idea of the passage*. In "signal words", the researcher provided words for starting questions, such as *who, what, where, when, why,* and *how*. The Students were taught how to use these words as prompts for generating questions. In the "main idea of the passage", the students were taught to identify the main idea of a paragraph and then use the main idea to generate questions. In the third session, the researcher read aloud and then, she asked few questions about the passage and answered them herself. After that, to carry out the research the students modeled the strategy use.

The students were divided into groups of three in one of the experimental groups (class B) and in the other one, they did the task individually (class A). Within each small group (class B), a student was assigned the role of the teacher and modeled the use of the strategy as they read a text. Then, the

students in each group generated 5 questions and also everyone in class A generated 5 questions. The treatment lasted for ten sessions twice a week. The students in all three groups were exposed to the same reading texts. However, the ones in one of the experimental groups (class A) generated questions individually, and learners in the next experimental group (class B) generated questions in groups of three. The learners in the control group answered the reading comprehension questions in the book, and each session they read a different passage. It should be mentioned that the reading comprehension questions of the texts were removed in the experimental groups. This means that in the experimental groups the students were merely exposed to the texts. During the treatment they read ten texts. After ten sessions, another sample of PET reading part, similar to the one used in the pretest, was administered to the students in all three experimental and control groups. The scores of this reading test were considered as their post test scores of reading.

Design

   The design of this study was quasi-experimental including experimental and control groups with pretest and posttest. Question-generation strategy use was considered as the independent variable and reading comprehension was considered as the dependent variable of the study. The learners' proficiency level was considered as a moderator variable.

Results

   To ensure the normality of the distribution of the participants' scores in the pre- test and posttest, One-Sample Kolmogorov-Smirnov test was used. Table 1 presents the results of One- Sample Kolmogorov-Smirnov test.

Table 1

Results of the Normality of Distribution for the Participants' Reading Scores in the Pretest and Post-test

One-Sample Kolmogorov-Smirnov Test

groups of students			pretest reading scores	Post-test reading scores
experimental group1	N		21	21
	Normal Parameters[a,b]	Mean	29.62	26.05
		Std. Deviation	1.72	1.88
	Most Extreme Differences	Absolute	.159	.147
		Positive	.126	.147
		Negative	-.159	-.122
	Kolmogorov-Smirnov Z		.730	.675
	Asymp. Sig. (2-tailed)		.661	.753
experimental group2	N		21	21
	Normal Parameters[a,b]	Mean	30.43	27.57
		Std. Deviation	1.47	2.42
	Most Extreme Differences	Absolute	.206	.169
		Positive	.206	.135
		Negative	-.195	-.169
	Kolmogorov-Smirnov Z		.943	.773
	Asymp. Sig. (2-tailed)		.336	.589
control group	N		21	21
	Normal Parameters[a,b]	Mean	30.57	25.43
		Std. Deviation	2.09	2.38
	Most Extreme Differences	Absolute	.154	.143
		Positive	.129	.143
		Negative	-.154	-.106
	Kolmogorov-Smirnov Z		.706	.655
	Asymp. Sig. (2-tailed)		.701	.784

a. Test distribution is Normal.

b. Calculated from data.

As indicated in Table 1, the p- value of the participants' reading scores in the pretest and post-test were higher than alpha level .05. It means the normality of the scores distribution of the participants' reading pretest and post-test. One-way between group analysis of variance (ANOVA) was used to see whether there were significant differences between the mean scores of

the participants' pretest reading scores in three classes. The results of this test are shown in Table 2.

Table 2

Results of One-Way Analysis of Variance (ANOVA) for the Participants' Reading Pretest Scores

ANOVA

Reading scores

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11.84	2	5.921	1.634	.204
Within Groups	217.43	60	3.624		
Total	229.27	62			

As illustrated in Table 2, the p-value of .204 indicated that there was not a significant difference between the participants' reading pretest scores in three classes. It means that the participants were nearly at the same level of reading comprehension before the treatment.

In order to check whether there was a significant difference between the students' reading post-test scores, the researcher used One-way analysis of variance (ANOVA). Table 3 reports the results of this ANOVA test.

Table 3

Results of One-Way Analysis of Variance (ANOVA) for the Participants' Reading Post-Test Scores

ANOVA

post-test reading scores

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	51.08	2	25.54	5.087	.009
Within Groups	301.24	60	5.021		
Total	352.32	62			

As illustrated in Table 3, the p value of .000 indicates that there was a significant difference between participants' reading post-test scores in three classes. Furthermore, in order to see where the difference significantly lies,

post- hoc Scheffe comparison was used. Table 4, shows the results of Post-hoc Scheffe comparison.

Table 4
Results of Post-Hoc Scheffe Comparison of the Participants' Reading Post-Test Scores in Three Classes
Multiple Comparisons
post-test reading scores
Scheffe

(I) groups of students	(J) groups of students	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
experimental groupA	experimental groupB	-1.52	.69	.097	-3.26	.21
	control group	.62	.69	.672	-1.12	2.35
experimental groupB	experimental groupA	1.52	.69	.097	-.21	3.26
	control group	2.14*	.69	.012	.41	3.88
control group	experimental groupA	-.62	.69	.672	-2.35	1.12
	experimental groupB	-2.14*	.69	.012	-3.88	-.41

*. The mean difference is significant at the 0.05 level.

The results of Post-hoc Scheffe test, in Table 4, confirmed that there was a significant difference between experimental group B and control group since the p value was .012 whereas there was not a significant difference between experimental group A and control group as the p value of .672 was more than 0.05. This means that the students in the experimental group B did better than the control group and experimental group A in the reading test. Thus, the null hypothesis was rejected.

Discussion
The main purpose of the present study was to investigate the effect of group- question generation strategy versus the individual- question generation strategy on the Iranian intermediate learners' reading comprehension.

The research question concerned the effect of group- question generation strategy, individual question generation -strategy, and no question generation strategy on the Iranian intermediate learners' reading

comprehension. The results obtained through the analyses of the data gathered through pre- test and post-test revealed that there was a significant difference on the effect of group-question generation strategy, individual-question generation strategy, and no-question generation strategy on the students' reading comprehension. It was found that the experimental group B, i.e., those students who employed group-question generation strategy outperformed experimental group A, i.e., individual- question generation strategy and control group (i.e., no-question generation strategy) in the reading comprehension post-test. The findings of the present study is supported with the findings of Fan (2010), and Ziyaeemehr (2012) who argued that group-question generation strategy has a positive effect on the reading ability of foreign language learners. This can be due to the fact that using strategies in group vs. individually make learners more energetically concerned in the reading task and more able to examine their reading comprehension. Furthermore, using effective learning strategies cause students to be more independent from their teachers and learners in the learning process can rely more on themselves and make learners more actively involved in the reading task. This is important, particularly in EFL settings where learners cannot accomplish good language learning by depending only on teachers who are available to them only for a very limited time. Success in foreign language learning necessitates that learners put forth personal learning effort.

On the other hand, the findings of the present study are not in line with the findings of Kassem (2013) in which he stated that individual question-generation strategy has a positive effect on the reading comprehension of foreign language learners. According to Sunggingwati and Nguyen(2013), students in self-question generation group supposed that self-questioning was so practical for them and that it should be learnt prior to their schooling particularly at the stage when they had many questions and it would have allowed them to improve their critical thinking skills. As a result, the students perceived that the self-questioning skills were of paramount importance and that self-questioning was useful for learning. This can be due to the fact that self-questioning made them concentrate on the teachers' explanations as well as allowed them to become more involved in learning

activities. What is more, they had to work harder in order to do self-questioning since they had to comprehend the reading passages before they were able to generate higher order questions. Also, it can be stated that the process was even more difficult for them when they had to generate questions for which the answers were implicitly stated in the passage. This process was more complicated where the answers required students to use previous knowledge and experience (Sunggingwati & Nguyen, 2013).

Similarly, as proposed by Sunggingwati and Nguyen (2013), creating a supportive classroom atmosphere for students is necessary to provide learning strategies such as self-questioning. This situation could be created by fostering shared understanding relationships between the teachers and students that assist students to feel comfortable, and also by creating activities that invite students to fully engage in their learning.

According to Akkaya, and Demirel(2012), asking questions is the greatest technique to make learning process more effective, and also to guide individuals to critical thinking and producing information. On the other hand, questions are valuable if only they are at the higher cognitive levels. Questions at knowledge, comprehension and application do not necessitate any cognitive activity rather than recalling. Moreover, questions at analysis, synthesis and evaluation level are more helpful at comparing old information with new ones, reaching value judgments and generating new information as said by (Akkaya & Demirel, 2012). Based on the results of the present study, it can be concluded that employing question- generation strategy in groups can be beneficial in enhancing the students' reading comprehension This can have some implications for language teachers , syllabus designers, and material writers. For instance, it is recommended that teachers provide some opportunities for the students to generate questions to reading texts themselves in the class. Yet, further research is needed to reach more generalizable results.

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