



Investigating the Efficiency of Task-Based instruction in Improving Reading Comprehension Ability

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ABSTRACT

This study was an attempt to investigate the efficiency of task-based instruction in improving reading comprehension ability in Iranian EFL students. To carry out the research, 102 Iranian university students were considered as the participants of the study. Following the administration of a standard Cambridge Key English Test (KET) as a pre-test, they were later randomly assigned to experimental and control groups. During the experiment, the experimental group received some supplementary material in the form of reading comprehension tasks, while the control group was given a placebo. Both groups received the same standard KET as a post-test (since the study focused on reading comprehension ability, the listening section of the KET was not used in the post-testing), to compare their reading comprehension ability improvement, as well as a final test, to examine the two groups' end-of-the-course language proficiency development, at the end of the experiment. Undoubtedly, the reliability and validity of the instruments were taken into consideration during the course of experiment. Subsequently, the obtained test scores were analyzed. The outcome of the analyses revealed a noticeable progress in the performances of experimental group on the tests. The results could, to a large degree, help the researcher to conclude that compared to the conventional (i.e., exercise based) method of teaching reading comprehension, task-based instruction was more effective in accelerating reading comprehension ability and in improving end-of-the-experiment language proficiency development in Iranian EFL university students.

Keywords: Classroom reading tasks, Cooperation, Language proficiency development, Reading comprehension development

Introduction

In many second or foreign language-teaching situations, reading comprehension is considered as important language ability because it enhances the process of language acquisition and helps students to read different materials for a variety of purposes. The ability to read, no matter what the purpose of reading is, requires readers to extract information from the text and combine it with information and expectations they already have. Reading is a meaning-construction process

and is a cognitively demanding skill which involves an interaction between text and reader, careful attention, memory, perceptual and comprehension processes, understanding words and sentences, along with a complex integration of the prior knowledge, language proficiency, and metacognitive strategies¹. Appropriate reading materials can noticeably help readers to improve their comprehension of textbook assignments, directions on exams, homework assignments, job applications, or questionnaires. Extensive exposure to such texts can enhance the process of lan-

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1. These strategies are used to regulate cognitive processing and deal with planning, comprehension monitoring, repairing, and evaluation of language strategies (see Koda, 2005, Richards & Renandya, 2002)



guage acquisition because they provide opportunities for introducing new topics for the purpose of reading and discussions. Proper materials can also assist students in comprehending the discourse structure and the organization of the reading passage by clarifying the passage's function, its general argumentative organization, its rhetorical structure, and the use of cohesive devices (Hadley, 2003). Comprehension is also enhanced if students are familiar with various types of reading materials and if such materials are related to understanding the plain facts as well as the implications, suppositions, and evaluations of the text (Grabe & Stoller, 2001).

Many reading specialists (e.g., Chodkiewicz, 2001; Ellis, 2000; Hadley, 2003; Rivers, 1990; Skehan, 1998; Wallace, 2001; Willis, 1996) have shown interest in using authentic material in the form of tasks for the purpose of improving reading comprehension ability without having to worry about unfamiliar structures and vocabulary. Such an interest, according to Pica (1997), has been motivated to a considerable extent by the fact that a pedagogical task is seen as a construct of equal importance to second language acquisition (SLA) researchers and to language teachers. It is both a means of clinically eliciting samples of learner language for purposes of research (Corder, 1981) and a device for organizing the content and methodology of language teaching (Prabhu, 1987). Classroom tasks are used to force attention to or to practice a particular structure, function, or sub-skill. They provide a purpose for the activity which goes beyond the practice of language for its own sake (see Ellis, 2003; Nunan, 1992). To fulfill a task, students need to cooperate with each other and exchange information about a problem or a topic which they have explored freely during the task itself (e.g., to prepare a group discussion report).

Reading tasks are slightly different from reading exercises. Tasks call for meaning-focused language use, while exercises call for form-focused language use. A task requires learners to participate in an activity as language users and to give focal attention to meaning conveyance. Thus, learners ought to employ the same communicative processes that are involved in real-world activities. In contrast, an exercise requires learners to function as learners where learning is intentional. Exercises have purely language-related outcomes (e.g., reading a passage and answering true/false questions), while tasks have

non-linguistic outcomes as well as language outcomes (e.g., reading a menu and deciding what to order in a restaurant). An exercise is premised on the need to develop linguistic skills as a prerequisite for the learning of communicative abilities, while a task is based on the assumption that linguistic abilities are developed through communicative activity (see Nunan, 2002; Widdowson, 1998). Proper reading comprehension tasks are intellectually challenging enough to maintain students' interest, sustain their effort at task completion, focus their attention on meaning, and engage them in confronting the task's linguistic demands.

The bird's-eye view of the literature stated above considered improvement in reading comprehension ability as a demanding procedure in accelerating language acquisition as well as language proficiency development. However, it has been observed that most Iranian EFL students face particular challenges in their quest to improve reading ability. Although, many solutions¹ have been proposed to deal with such weaknesses in accomplishing various reading assignments, they did not seem to be practically applicable probably because they necessitated great changes in, for example, the teaching syllabi or materials. As a result, the most convenient solution for the core problem of Iranian EFL students' reading deficiencies have remained vague. This situation indicated a need for more research in related area which inspired the initiation of the present study. The aim of this study was to empirically employ a task-based method of teaching reading comprehension and observe its effect on the improvement of reading ability, compared to a conventional (i.e., exercise based) method of teaching reading. To fulfill this objective, the following research questions were proposed.

1. Does task-based instruction improve reading comprehension ability in Iranian EFL students?
2. Does task-based instruction improve the end-of-the-course general language proficiency in Iranian EFL students?

With the intention of investigating the aforementioned research questions empirically, the following hypotheses were formulated:

1. Task-based instruction accelerates the development of reading comprehension ability in Iranian EFL students.
2. Task-based instruction improves the end-of-the-course language proficiency development in Iranian EFL students.

1. Some of the proposed solutions are focusing on improving metacognitive strategies, providing linguistically simplified reading passages, or using translation as a supplementary technique in teaching English.

Methodology

Participants

The target population of this research included a division of English major (associate degree) students (male and female) who had passed a placement test (i.e., a Cambridge Key English Test) at a branch of Elmi-Karbordi university in Tehran, Iran in the academic year of 2005-2006. The sampling procedure in this study was a random selection. Therefore, two groups (51 students in each group) were randomly selected to serve as the experimental and control groups of the study.

Instruments

Two instruments, including a standard Cambridge Key English Test (KET) and a final test, were employed in this study to collect the required data. The sample of KET used in the study was selected from Cambridge ESOL (2006) pp. 48-68, which was given to both groups as a pre-test and a post-test. However, since the study focused on reading comprehension ability, the listening section of the KET was not used in the post-testing. The final test was an end-of-the-course assessment test which was constructed based on the students' course book, i.e., *Reading Skillfully: Book one* (Mirhasani & Rahmani, 2004). The reliability and validity of the instruments were carefully examined in the study (see results section below).

Design and Procedure

During the experiment, the two groups received instructions for 16 sessions, which were aligned with the ongoing university program. The regular university course and the supplementary tasks in the experimentation were part of the procedure in this study. At the beginning of the class time in every session, both groups studied a complete unit of their course book. Later, some additional material was given to experimental group, while the control group only received placebo (i.e., they were asked to do the exercises of the course book). The additional material given to experimental group included a collection of reading comprehension tasks (the difference between tasks and exercises is explained in the introduction section above). Students were asked to

work on a number of tasks collaboratively and then report the results to the class. The reading comprehension tasks administered in this study were collected from a number of sources (i.e., Collis, 1996; Doff & Jones, 1999; Hartley & Viney, 1984; Hill, 1965; Mirhasani & Alavi, 2004a/2004b; Richards, 2002a/2002b; Lee & Gundersen, 2002a/ 2002b; Willis, 1996), and were organized in an ascending order from the less challenging to the most challenging to keep their arrangement within the acceptable sequence of difficulty. The reason for such ordering was to provide experimental students with less challenging tasks at the primary sessions of the experimentation, to familiarize them with the characteristics of the tasks, and to prepare them for more challenging ones. The collection included one-/two-way, convergent/divergent, and open/closed reading comprehension tasks (see Appendix A for a sample task).

During the experiment, the two groups received three tests in the form of a pre-test, a post-test, and a final test. The pre-test (i.e., the KET) was a placement test which was given to the entire target population prior to the selection of experimental and control groups. Later, the two selected groups' performances on the reading comprehension section of the KET were analyzed to ensure the homogeneity of the groups in terms of reading ability (the focus of the study). The KET was re-administrated to both groups at the end of the experiment as a post-test (as stated above, the listening section was not used in the post-testing) to compare their development in terms of reading comprehension ability. The final test was a teacher-made achievement test which was constructed based on students' course-book introduced by the university. The purpose of final testing was to measure the two groups' end-of-the-course language proficiency development.

Results

To examine the construct validity of the instrument a factor analysis was run to investigate the underlying construct of the tests. As it can be seen in table 1, only one factor was extracted for the tests, and the total amount of variance explained by this factor was 4.45. According to the table, this factor accounts for 63.64 percent of the variance which is a good index of construct validity for a teacher-made battery of test.

Table 1: Total Variance Explained

Components (tests)	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.45	63.64	63.64	4.45	63.64	63.64
2	.09	1.37	100.00			
3	.16	2.33	98.62			

Extraction Method: Principal Component Factor Analysis/ a. 1 component extracted

Table 2 shows the members of the factor being extracted and at same time displays the factor loadings of all the tests. As it can be seen in the table, the tests loaded under one single factor (i.e., component). Since reading comprehension comprised the majority of the tests contents, it could be concluded that this single factor was the reading comprehension ability. Thus, it could be stated that the tests shared the same underlying factor and to a large degree tested reading comprehension ability.

Table 2: Factor Extraction

Rotated Component Matrix (a)	
	One Component
Pre-test	.66
Post-test	.79
Final exam	.87

To compute the reliability of the instruments, the Kuder-Richardson's reliability coefficient (KR-21) was employed. The reliability coefficients of the measures of the pre-, post-, and final tests were .84, .90, .81 respectively, which were all above the index of ($\alpha=.80$) and thus fell within the range of an acceptable estimation of reliability.

To compute the criterion-related validity of the instruments, the Pearson correlation coefficient was employed. The results of the correlation (Table 3) between the standard KET whose validity had already been approved and the teacher-made final test indicated that the correla-

tion coefficients were statistically significant because their one-tailed probability levels were all less than the index of 0.05.

Table 3: Pearson Correlation Coefficients

		Pre-test	Post-test
Pre-test	Pearson Correlation	1	.352(**)
	Sig. (1-tailed)		.000
	N	102	102
Post-test	Pearson Correlation	.352(**)	1
	Sig. (1-tailed)	.000	
	N	102	102
Final exam	Pearson Correlation	.415(**)	.748(**)
	Sig. (1-tailed)	.000	.000
	N	102	102

To check whether the experimental and control groups were homogeneous at the beginning of the experimentation concerning reading ability, a t-test was performed on their test scores on the reading section of the pre-test of the KET. As shown in Table 4, the mean differences of the experimental and control groups' performance on the test was 1.50 (the mean scores of the two groups were 29.51 and 28.01 respectively).

The results of the Levene's test indicated that the two groups were quite homogeneous in terms of their variances, $F(1, 128) = .037$, $p = .847$. The results led to the conclusion that both groups were quite equal in terms of reading comprehension ability at the beginning of the experiment, $t(100) = .920$, $p = .179$ (one-tailed).

Table 4: Independent T-test for pre-test

Levene's Test for Equality of Variances				T-test for Equality of Means					
	F-value	Sig. (p)	T-observed	Degree of freedom	Sig. (one-tailed)	Mean Difference	Standard Error Difference	95% Confidence Interval of the Difference	
								lower	upper
Pre-test	Equal variances assumed	.037	.847	.920	100	.179	1.50	1.52	-1.61 4.41

To investigate the two groups' reading comprehension improvement at the end of the experiment another t-test was performed to compare the mean scores of the experimental and control groups' performances on the reading section of the KET in the post-test (the mean scores of the two groups were 48.61 and 26.73 respectively). As shown in Table 5, the T-observed value was

($t=15.733$). This amount of T-value at 100 degree of freedom ($p=.000$ one-tailed) is higher than the critical T-value of 1.64. The results indicated that there was a statistically significant difference between the mean scores of the two groups (i.e. 21.87) at the end of the experiment meaning that the experimental group did outperform the control group in the post-test of KET.

Table 5: Independent T-Test for Post-Test

		Levene's Test for Equality of Variances		T-test for Equality of Means						
		F-value	Sig.	T-observed	Degree of freedom	Sig. (one-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									lower	upper
Post-test	Equal variances assumed	.067	.796	15.733	100	.000	21.87	1.39	19.12	24.62

To examine the two groups' end-of-the-course language proficiency development, an independent t-test was performed to compare the mean scores of the experimental and control groups' performances on the final test (the mean scores were 38.386 and 27.870 respectively). As it can

be seen in Table 6, Levene's F ($F=2.392$) has a probability level of ($\text{sig.}=.124$) which is greater than 0.05 level of significance at which the hypotheses were tested. This was an indication of the presumed homogeneity of the two groups in terms of their variances.

Table 6: Independent T-Test for Final Test

		Levene's Test for Equality of Variances		T-test for Equality of Means						
		F-value	Sig.	T-observed	df	Sig. (1-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									lower	upper
Final Test	Equal variances assumed	2.392	.124	9.388	100	.000	10.51677	1.12018	8.300	12.733

As the table shows, the T-observed value is ($T=9.38$). This amount of T-value at 100 degrees of freedom ($p=.000$ one-tailed) is higher than the T- critical=1.64. This indicated a considerable difference between the mean scores of the two groups' performances on the final test (mean differences= 10.51)

Conclusion and discussion

The present study was an effort to investigate the efficiency of task-based instruction in im-

proving reading comprehension ability. It attempted to empirically reveal that activities in the form of classroom tasks can be very helpful in accelerating students' language learning development because they preserve situational and interactional authenticity to a large extent, can engage learners in using language pragmatically rather than displaying language, and require learners to employ cognitive processes such as selecting, classifying, ordering, reasoning, or evaluating information in order to carry out a task. To achieve the purpose of the study, two research

hypotheses were formulated at the onset. However, to substantiate the hypotheses, the study followed a holistic, experimental method of approach to collect and analyze data. Therefore, the overall performances of the experimental and control groups on the instruments were examined and compared with one another. The results of the t-test (Table 5) performed to compare the mean scores of the two groups' performances on the reading comprehension section of the KET in the post-test revealed a significant difference between the mean scores of the two groups (mean difference=21.87). The experimental group's performance on the post test of KET (\bar{x} =48.61) was considerably higher than that of the control group (\bar{x} =26.73). This result could lead the researcher to the conclusion that the task-based instruction employed in this study had significantly improved the experimental group's reading comprehension ability. This in turn provided sufficient support for the acceptance of the first hypothesis (i.e., task-based instruction accelerates the development of reading comprehension ability in Iranian EFL students). Afterward, to observe the two groups' end-of-the-course language proficiency development their performances on the final test were compared with each other through the application of another T-test. The results (Table 6) indicated a considerable difference between the mean scores of the two groups' performances (mean difference=10.51). The experimental group with a mean score of (\bar{x} =38.38) outperformed the control group whose mean score in the same test was (\bar{x} =27.87). This was an indication of a significant improvement in the experimental group's language proficiency at the end of the experiment when compared with that of the control group. These results provided enough evidence for the acceptance of the second hypothesis (i.e., task-based instruction can improve the end-of-the-course language proficiency development in Iranian EFL students).

The findings of this research were in line with the results of many studies concerning the valuable use of tasks in improving language learning. For example, Skehan and Foster (1999) observed that tasks can have beneficial effects on the nature of performance, thus leading to greater fluency and complexity, less dependably, and greater accuracy. Similarly, Willis and Willis, (1987) investigated the effectiveness of using consciousness-

raising tasks in the classroom to improve language learning by allocating the learners' attention between form and meaning while they were completing an earlier task. Lapkin and Swain (2000) made use of dictogloss¹ and jigsaw² to explore the effectiveness of using classroom tasks and L1 as a scaffolding strategy to improve language learning. Last but not least, Van Der Stuyf (2002) focused on the use of inscriptions (i.e., external representations, for example graphs and tables) for teaching scientific inquiry and experimentation to teach students valid experimentation skills. It was observed that the tasks could significantly help students learn about the things to be considered when designing an experiment. The outcome of the study was convincing enough to be successfully applied to analogous situations. It could also offer valuable insights to EFL/ ESL/ESP teachers and syllabus designers to incorporate pedagogic tasks in their teaching syllabi. Therefore, in the light of the findings of this study, it is recommended that language teachers incorporate tasks into the classroom activities to accelerate students' development in reading skills and create cooperative learning and problem solving situations in the classroom to promote and sustain learners' effort in task completion, focus their attention on meaning, and engage them in confronting the task's linguistic demands. These provide students with different conditions (similar to those presented in the real world) to practice the language communicatively and develop cognitively.

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Appendix A

Dealing with unfamiliar words: Try to answer these questions from the information in the paragraphs- with some blanks- below. Compare your answers.

- 1- Where was Midori born?
- 2- What instrument did her mother play?
- 3- Where did Midori's mother take her when she was a baby?
- 4- What did she do when she was two years old?

Midori Goto was -----an ----- child in Osaka, Japan. Her father was an ----- and her mother was a ----- violinist. Midori's mother, Setsu Goto, ----- that almost from the "-----" Midori was -----, I knew she was "----- to be a musician". When she went to concert hall to -----, Midori's mother took her baby daughter -----, Midori often ----- in the front ----- while her mother practiced on -----, One day, when Midori was ----- two years old, she began to ----- the music that her mother had-----two days before.