Task-based Language Teaching and Its Effect on Medical Students’ Reading Comprehension

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Abstract—Developing reading comprehension skills is a significant requirement for medical students to communicate with other students and experts in the field. In Iranian EFL context, English is an obligatory course offered in all universities with an emphasis on the reading skill. The most widely applied teaching method in Iranian EFL classrooms is Grammar Translation Method with the result that many students still facing difficulties in reading English materials. With the growing interest in Task-Based Language Teaching (TBLT), the present quasi-experimental study aimed at investigating the effect of using this method in improving the reading comprehension skill of medical students. It also aimed to examine whether gender makes a difference in this regard. To these ends, 60 intermediate students comprising 30 males and 30 females studying at the Guilan University of Medical science were randomly divided into experimental and control groups. The experimental group (n=30) received task-based instruction (TBI) based on Willis and Willis’ (2007) framework, while the control group was taught using the conventional GTM. Results of independent samples t-test at the alpha level of .05 revealed that TBLT was useful in enhancing the participants’ reading comprehension. Paired-samples t-test also demonstrated that both groups progressed after the experiment. Finally, it was found that there was not any difference between males and females who either received TBI or GTM. These findings confirm the usefulness of tasks as valid tools which can be applied to teach reading to medical students.

Index Terms—reading comprehension, task-based language teaching, medical students

I. INTRODUCTION

Nowadays, English is regarded as language of science and almost all academic contexts and universities offer courses in English. Being able to communicate is possible when there is a shared language to negotiate meaning, and English language has made scientific communication among academicians feasible. This has changed the status of English from a foreign language to an international means of communication common to all nations throughout the world (Shomoossi, Rad & Rakhshani, 2013). The use of English language is very common among physicians and those involved in medical field; therefore, having good language skills would enable Iranian medical students and nurses to take part in forums and discussions with their counterparts all over the world. One of the important tools through which knowledge in general and scientific information in particular, can be communicated is written stuff; as a result, those who are engaged in the field of Medical Science require an acceptable command of reading skill.

Ellis (2000) defined reading comprehension as the level of text understanding which originates in the interaction between the written words and the way those words activate knowledge outside the text. A common belief is that in the contexts where English is a Foreign Language (EFL), reading comprehension plays an important role, since it is the main means for learning new information and it is considered as the most significant skill needed for the students’ achievement and success (Iranmehr, Erfani & Davari, 2011). In other words, the importance and status of reading comprehension skills in Iranian academic contexts, like other EFL contexts, is undeniable. In fact, as Rahimi and Azhegh (2011) pointed out, reading comprehension is often regarded as the main goal of learning the English language. Also, the structure and framework of existing textbooks in Iranian academic contexts clearly verifies the central role of reading comprehension skill, as a great proportion of these textbooks is devoted to flourishing this skill among the learners (Farhady, 2006).

In spite of the fact that in the Iranian EFL context it is tried to improve the students’ reading skill, Mirzaei and Azizian (2012) noted that many Iranian university students still lack the necessary skill for mastering the reading comprehension skill. One probable reason for this might be the use of traditional teaching methods like Grammar Translation Method (GTM) and the fact that method still prevails in many educational settings. In classrooms in which GTM is used, communication is mostly through the learners’ native language. The main goal of these classes is fostering students’ vocabulary and grammatical knowledge with the use of word lists and explicit teaching of grammar rules by the teacher. Textbooks also play an important role in these classes as they are used to teach the concepts and have the students practice what was taught to them through written or oral drills and translation exercises. Moreover, as Fazilatfar (2010) stated, translation is the key to GTM. In EFL/ESL classrooms which practice GTM there is no chance for the students to create meaning in the English language and they only require the learners to do word by word translation of texts; hence leaving the students bored and frustrated (Richards & Renandya, 2001). Also, in these classes there is no opportunity for the learners to understand the relationship between L1 and the target language. As such, the
language turns into a set of vocabulary items which are tied together, and the students do not show much interest and motivation in learning the English language (Keyvanfar & Modaresi, 2009). Due to the importance of mastering the reading skill and using study strategies and their significance as one of the central needs of the EFL Iranian university students, many English Language Teaching (ELT) researchers have tried to probe these matters more deeply (Hayati & Jalilifar, 2010). Language researchers believe that using process-based teaching methods such as Task-Based Language Teaching (TBLT) or Task-based Instruction (TBI) can be a solution for solving problems and inefficiencies associated with the use of traditional methods. Process-based teaching methods can also be effective in improving the students’ learning process in language courses (Fani, Ghiasi & Ghaneh, 2011).

Using TBLT enables the students to consider different forms of language rather than concentrating on a single form which is mostly practiced in GTM. Whereas GTM leads the students from accuracy to fluency, the aim of TBLT is integration of all four skills and moving from fluency to accuracy plus fluency. Accordingly, TBLT can be regarded as a comprehensive approach which can be adapted to address the needs of all students (Sajjadi, Ahmadi, Heidarpour, Salahi Yekta, Khadembashi & Rafatbakhsh, 2012). In TBLT the focus is on utilizing authentic language and also asking students to do meaningful tasks using the target language. The primary focus of classroom activities is the task that is an activity in which students use language to attain a specific outcome (Nunan, 2004).

There are a number of studies on TBLT and its effect on the reading comprehension ability of the EFL learners; however, these studies in the medical field are very limited. As such, this study aimed to determine the effect of TBLT on reading comprehension skills of a group of medical students, and to this end the following research questions were formulated:

1. What is the effect of TBLT on Iranian medical students’ reading comprehension skill?
2. Does gender have any effect on the reading skill of medical students who received TBI or GTM?

In light of the aforementioned research questions, these null hypotheses were formed:

Ho1. TBLT does not have any effect on Iranian medical students’ reading comprehension skill.

Ho2. Gender does not have any effect on the reading comprehension skill of medical students who received TBI or GTM.

II. REVIEW OF LITERATURE

Task-based language teaching (TBLT) which has attracted unprecedented attention in recent years is regarded as an approach in which meaning is given primacy over form. In other words, in Task-Based Instruction (TBI) instead of engaging the learners in form-focused activities, they perform communicative tasks. As Willis (1996) stated, in TBI learners are supposed to express their own ideas about the topic of the lesson, either orally or in a written mode (Willis, 1996).

Willis (1996) defined the term task as “activities where the target language is used by the learner for a communicative purpose in order to achieve an outcome” (p. 28). The logic for TBLT as a teaching approach can be found in theories of language acquisition such as those of Long (1996) or Skehan (1998) which emphasize the vital role of meaningful language use combined with opportunities to discover in what ways meanings are generated in the L2.

TBLT is typically based on three stages (Willis & Willis, 2007). The first of these is the pre-task stageduring which the teacher introduces and defines the topic and the learners engage in activities. The activity reflects real life situations and learners focus on meaning. This stage is followed by what Willis (1996) called the “task cycle” during which the learners perform the task, typically a reading exercise or a problem-solving exercise, in pairs or small groups. They then prepare a report for the whole class on how they did the task and what conclusions they reached. The final stage is the post-task phase during which specific language features are analyzed.

There are a number of studies which have explored the effect of TBI on the reading ability of EFL learners. In what follows a number of these studies are reviewed.

In a study by Fani et al. (2011) on the effect of TBLT on EFL high school students’ reading comprehension and also their ability in paraphrasing texts, it was revealed that TBI not only positively affected the learners’ performance in reading comprehension, but also increased their reading speed and motivation. In a further study, Rahimi and Azhegh (2011) explored the effect of TBLT on reading comprehension ability and also achievement of a number of students in an English for Specific Purpose course. They used two intact classes of engineering students and taught one group based on GTM, and the other one received TBI employing pre-task, task, and post-task stages. Results of the study indicated that experimental group which went through TBI outperformed control group in their reading comprehension.

Poorahmadi (2012) also investigated the effect of TBLT on the reading comprehension ability of 102 Iranian EFL learners and found TBI to be effective in this regard, as the students’ reading ability was accelerated and their general language proficiency was also improved by the end of the experiment. However, In Poorahmadi’s study gender differences were not considered as a variable which could possibly affect the participants’ performance.

Chalak (2015) examined the effect of TBLT on reading comprehension of a group of Iranian EFL learners. To this end 135 high school students were divided into two experimental and two control groups. Results of the study revealed that participants in the experimental group who used tasks progressed in their EFL reading performance, and there was more interaction among the students who were involved in experiment. However, the study of Chalak (2015) only contained females in the experiment and as such cannot be considered generalizable.
Due to the scarcity of research on TBI with a focus on Iranian medial students taking degree courses in General English, the present study was an attempt to address this gap in literature and investigate the likely impact of using TBLT on reading comprehension ability of a group of medical students in Iran.

III. METHODOLOGY

A. Participants

Participants of the present study were 60 freshmen, all at intermediate level, selected from a paramedical school at Guilan University of Medical Sciences, located in northern Iran. The students were taking General English course. Selection of the participants was based on convenient sampling and since there were only two courses in English at that semester, one of the groups was randomly considered as the experimental group and the other was selected to be the control group. Each group comprised of males (n=15) and females (n=15) with an average age of 19±1. The participants were all native speakers of Farsi.

B. Materials and Instruments

The materials used in this study were 9 reading texts adopted form the medical students’ textbook, namely Medical Reading written by Mesbah (2010). The textbook was designed as English for Academic Purposes, specifically addressing pre-intermediate and upper-intermediate levels. This book was introduced as a source book and included some reading passages which fulfilled the aims of the present study.

Also, in order to homogenize the learners in terms of their reading proficiency a standard reading test comprising 50 multiple-choice items drawn from the book Longman Complete Course for the TOEFL Test (Philips, 2007) was utilized. Each item was assigned one score and the total score of the students reading proficiency was calculated out of 50.

The other instrument utilized in this study was a researcher-made test which comprised of 50 questions in 7 sections (A-G). The test was used as both pre- and post-test and was designed to estimate probable differences between the experimental and control groups. It needs to be pointed out that the test was developed out of the course book of the students. In constructing the test it was tried to follow Hughes’ test specification which is based on meaningful language learning (Hughes, 2003). An expert panel of experienced L2 teachers confirmed the validity and reliability of the test and its Content Validity Index (CVI) was determined to be 0.76, indicating that the test was a reliable and valid one.

Section A of the test consisted of 10 matching questions designed for evaluating the participants’ vocabulary knowledge. In sections B and C students were required to write Persian equivalent and English equivalent of some words, respectively. Sections D and E comprised of fill-in-the-blank items. Part F asked the students to translate some short paragraphs into Persian, and finally in Section G a reading passage was provided with 5 comprehension questions drawn from it. After making sure about the appropriateness of the test, it was administered once at the outset of study as a pre-test in order to assess the participants’ reading skills and once at the end of the experiment as a post-test with the aim of measuring their probable progress in reading comprehension. One score was assigned for each correct answer and the total score was estimated out of 20.

C. Procedures

In collecting data for the present study, first a written consent was given to the participants and it was ensured that all of them willingly take part in this experiment. Then, a standard reading test was administered to two groups before starting the experiment, for the purpose of homogenizing and controlling the participants in their reading proficiency level. By tabulating results of the reading proficiency test it was indicated that there were two homogeneous classes as control and experimental groups with 30 intermediate students in each.

The classes for each group were held once a week lasting for 90 minutes. There were totally 14 regular weeks within a semester. The instructor in both groups was an experienced faculty member of English Language Department of the University of Guilan who was qualified enough to teach both experimental and control groups.

In the first session, the pre-test was administered to both experimental and control groups. In both classes it was tried to help the learners in improving their reading skill; however, they differed in terms of the teaching methodology employed. The experimental group received TBI following the three stages of pre-task, task cycle and post-task as suggested in Willis’ (1996) framework. In the pre-task phase, the teacher explored the topic of the passages, activated the relevant schemata, and highlighted the important vocabularies or expressions. The students also prepared themselves for doing individual tasks. In the task cycle which itself comprised of three consecutive sections, first the students were required to do the tasks either in pair or in small groups, with the teacher monitoring their performance and encouraging more communication among them. Then, the students were given a short time to plan for the reporting section and think about how they did the task. As suggested by Willis (1996), since accuracy mattered in this phase the teacher was ready to deal with any language problem the students faced and provided them with necessary advice when needed. In the final section of the task phase the students were asked to present their report about the task to the whole class with the teacher acting as a chairperson and provider of the necessary feedback. In the post-task phase, first specific features of the passage were examined and discussed by the learners, and then with the help of the teacher new words and phrases were thoroughly clarified. The tasks utilized in the present study consisted of linking phrases, descriptions tasks accompanying pictures, listing characteristics, comparing similarities or differences, presenting
lectures and doing mini-projects which needed creativity and innovation on the part of the learners. An important feature of the teaching process in the experimental group was that communication between teacher and students and among students was through L2 and it was tried to minimize the use of L1, i.e. Persian as much as possible.

In the control group, classroom teaching procedure which lasted for 14 weeks went on based on the principles of the traditional method, i.e. GTM. The primary focus of the class was on having the students learn grammatical rules and vocabularies. More specifically, vocabulary items were taught through direct translation into the native language of the learners. Moreover, in the control group reading passages were directly translated into Persian. Interaction between the teacher and the students was to its minimum extent and the class was teacher-controlled. In fact, the reading course in the control group was mainly text-based and in delivering the lessons the teacher mostly used students’ L1.

At the end of the semester and after the completion of classes, a post-test was administered to the students in both experimental and control groups. Since the same test was used for both pre- and post-test, it was tried to make the time interval longer. Therefore, the post-test was administered one week after the completion of the classes.

D. Data Analysis

This study had a pre-test post-test control group design. After obtaining the students’ scores in both pre-test and post-test, they were subjected to analysis using SPSS version 16. Using Shapiro-Wilk’s test of normality, it was shown that the data in both pre-test and post-test were normally distributed (p_{pre-test}=.33, p_{post-test}=.21, p>.05); thus, parametric tests seemed to be appropriate for analyzing the results of the present study. Statistical tests used in this study were measures of central tendency including mean and standard deviation and also inferential statistics, namely independent and paired-samples t-test; and the level of significance was set at P ≤ 0.05.

IV. RESULTS AND DISCUSSION

The present quasi-experimental study aimed at exploring the effect of TBLT on reading comprehension skill of a group of medical students studying at the Guilan University of Medical Sciences. The participants were 60 males and females with an average age of 19±1 who were randomly assigned to experimental and control groups each comprising 30 learners. The participants were at the intermediate level of language and were taking degree courses of General English. As explained in the data collection procedures section, the control group was taught through the traditional GTM and the experimental group received TBI. In this section results of the data analysis are presented and the findings are discussed in light of the previous studies which probed the same line of research.

Table 1 below presents descriptive statistics including mean, standard deviation and standard error of means for the pre-test. As shown in the table, the mean score of the control group is (M=6.58, SD= 2.13) and for the experimental group it is (M=6.67, SD= 2.03).

| Table 1. | DESCRIPTIVE STATISTICS FOR THE PRE-TEST |
|---|---|---|---|
| groups | N | Mean | Std. Deviation | Std. Error Mean |
| control group | 30 | 6.583 | 2.133 | .389 |
| experimental group | 30 | 6.675 | 2.039 | .372 |

In order to examine whether the differences in mean scores obtained from the pre-test of reading are statistically significant an independent samples t-test was run on the data and the results are illustrated in Table 2.

<p>| Table 2. | RESULTS OF INDEPENDENTSAMPLES T-TEST FOR COMPARING EXPERIMENTAL AND CONTROL GROUPS IN THE PRE-TEST |
|---|---|---|---|---|---|---|
| Levene's Test for Equality of Variances | t-test for Equality of Means |</p>
<table>
<thead>
<tr>
<th>F</th>
<th>Sig.</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>posttest</td>
<td>Equal variances assumed</td>
<td>.841</td>
<td>.363</td>
<td>-6.02</td>
<td>57</td>
<td>.000</td>
<td>-3.379</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>-6.03</td>
<td>4</td>
<td>56.5</td>
<td>.000</td>
<td>-3.379</td>
<td>.5602</td>
</tr>
</tbody>
</table>

As Table 2 indicates, the p-value of Levene’s test at the significant level of .05 is higher than the assumed alpha level; as such, the upper row of the table is to be referred to. The p-value for the t-test is also higher than .05 (t(8)= .18, p>.05). This result revealed that there was not a statistically significant difference between the experimental and control groups in terms of their reading comprehension skill at the outset of the study and the two groups were more or less similar in this regard.

Table 3 illustrates descriptive statistics for the post-test. Apparently, the mean score of the participants in the experimental group (M= 15.89, SD= 2.01) is higher than the mean of control group in the post-test (M= 12.51, SD= 2.28). However, in order to check whether this is statistically true, an independent samples t-test was also run on the results of the post-test the output of which are shown in Table 4.

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As shown in the table, at the significant level of .05 the p-value is less than our assumed alpha level ($t(57)= -6.02$, $p<.05$). This indicates that there is a statistically significant difference between experimental and control groups and experimental group has outperformed the control group in the post-test of reading. As such, the first null hypothesis of the study can be rejected.

In order to check the participants’ progress before and after intervention, paired samples t-tests were conducted and the results of descriptive as well as inferential statistics are shown in Tables 5 and 6 below.

As illustrated in Table 6 and based on the results of paired-samples t-test, both experimental and control groups has improved in their reading proficiency after the completion of classes. To put it more specifically, the $p$-value for both control ($t(9)= 2.16$, $p<.05$)and experimental groups ($t(9)= 32.38$, $p<.05$)is less than .05.

In order to answer the second research question which explored the effect of gender on the reading skill of medical students who took part in this study, another independent sample t-test was run on the data obtained from the students’ post-test. Table 7 shows descriptive statistics for the gender differences between the participants.

As indicated in the table, the mean score of reading comprehension for males is ($M= 13.52$, $SD= 2.80$) and for females it is ($M= 14.79$, $SD= 2.51$). Table 8 presents the results of independent samples t-test used for checking whether the difference between means is statistically significant.
The findings of this study were in congruence with the results of many studies which revealed the valuable and efficient use of tasks and TBLT in facilitating language learning. In fact, the results of this study indicated that participant’s reading comprehension skill in experimental group who received TBI had substantially promoted after the experiment. In other words, the mean score of reading comprehension test in the experimental group considerably increased by employing TBLT (t(57)=-6.02, p<.05). This finding is in line with the study of ZandMoghadam (2007) who also found that TBI could positively affect EFL learners’ reading comprehension skill and vocabulary retention. Our findings also support what Fani et al. (2011) mentioned about the effect of TBLT on the reading ability of learners, as they also found that using tasks is effective in improving the learners’ reading comprehension skill. Moreover, the findings of the present study confirm the results of Rahmi and Azhegh’s (2011) investigation who found that engineering students can benefit from TBLT in their reading courses. The findings of this study are also consistent with the results of Joe (1998), de la Fuente (2006), Oríranmehr, Erfani and Davari (2011), Malmir, Najafi Salem, and Ghasemi (2011), who argued for the impact of TBLT on the learners’ reading comprehension and vocabulary knowledge. Moreover, similar to the study of Nahavandi and Mukundan (2013), the present study did not find any significant effect for the variable of gender in reading comprehension of the learners.

Nevertheless, the findings of the present study do not support what Adams and Newton (2009) mentioned about the implementation of TBLT in English training courses in the East Asian countries, in that they have found that using TBLT was not successful in those courses. Additionally, the results of this study are contrary to the belief of some language theorists who claimed that applying TBLT is difficult or even impossible due to time limitations or inexperienced teachers (Joe, 1998; Willis & Willis, 2007).

V. CONCLUSION

Task-based language teaching with its emphasis on meaning-making can be considered as an innovative approach in Iran’s academic contexts. The findings of this study provided further insights into the effectiveness of using tasks in teaching the reading comprehension skill to Iranian medical students in an environment in which English is primarily considered as an EFL language mostly applicable for sharing knowledge and communicating with people all over the world. The present study also revealed that there is no difference between males and females in using TBLT and both can benefit from this method.

There are a number of pedagogical implications which can be drawn from this study. First, as TBLT was shown to be helpful in enhancing the reading comprehension ability of medical students, university professors can benefit from this approach and use it in their teaching. Having university students go through different phases of TBLT can make English classes more meaningful and involve students in more communicative activities. Given the ever-increasing role of English as an international means of communication, TBLT which has been proved to be an effective teaching approach, should receive more attention from the practitioners in the Iranian EFL context. In this respect, teacher training courses should also provide sufficient practice in order to familiarize EFL teachers with this valuable approach, and ensure that the instructors gain mastery over using it in their classrooms. Secondly, due to the significance of tasks in promoting language learning of EFL students at universities textbook writers and materials developers and also syllabus designers are encouraged to embed more tasks in the textbooks.

As the present study dealt with a limited number of participants and it did not last for many sessions, more longitudinal research taking account of more students are needed. Also, further research can investigate the effect of TBI on other language skills of EFL learners (such as speaking or writing) in academic contexts. Finally, further
research can be conducted regarding the effect of TBLT on the reading comprehension of learners at other proficiency or academic levels.

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REFERENCES
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