The Impact of Cooperative Reading E-Materials Adaptation on Reading Comprehension Performance of Iranian EFL Learners

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Abstract

With advent of eLearning, the scholars have been trying to revisit the teaching and learning methodology. Due to the features of e-learning, the early attempts were made to develop the e-content best suits the educational goals. Reading, due to its prominence in EFL/ESL classes, is of no exception. Adopting the traditional teaching strategies, the teachers can’t assure themselves that the reading course will be quite as effective in involving the learners as the traditional ones. The purpose of the present study was to probe if peer-cooperative reading e-materials adaptation has any effect on learners’ participation in online reading classes. In order to achieve the purpose of the study, 90 Iranian students who were studying at Noor Language Center, an independent center, which offers online courses as well as the chalk-and-board ones, were selected. The selection was on the basis their scores obtained in TOEFL (a language proficiency test). Then they were assigned randomly to three groups, one control and two experimental ones. Following sampling, they undertook a 20-session treatment. With a design of quasi-experimental pretest posttest, the findings showed that involving the students in the adaption process of reading e-materials improved their reading comprehension performance.

Keywords: materials adaptation, e-material, reading comprehension, cooperative adaptation, e-learning

1. Introduction

As soon as the web-based technology was introduced to the field of language teaching and learning, traditional practices to teach different language skills including reading were revisited.
Scholars try to ensure that the long practiced teaching strategies would enhance language learning. Such a goal can only be achieved through understanding the intended meaning (Ghassemi, 2013). In other words, language learners through transforming the data obtained from perceiving and processing the features of the language into information comprehend the meaning (Alalou & Chamberlain, 1999; Finocchiaro & Bonomo, 1973; Horton, 2000; Molina, 1997). Thus, it is advisable to regard reading as a skill integrated into online language classes because through developing such a modality, it provides EFL e-learners with a first hand language experience. Otherwise, such a low proficiency level may demotivate e-learners to participate actively in accomplishing the learning tasks online (Horton, 2000). Alternatively, such experiences serve the e-learners to successfully monitor their own learning (J. C Richards, 2008). To be precise, e-learners will employ all learning strategies accessible to them, including meta-cognitive, cognitive and socio-effective ones in order to monitor their own learning process (Shirini Bidabadi & Yamat, 2011). Through such an application of strategies, the learners will “see language in-use” (Harmer, 2001, p. 282). And it is going to motivate them by making the online learning setting more interesting.

Since there is no any physical class or teacher-student face-to-face communication, encouraging the e-learners to get themselves involved in the learning process in general and reading process in particular is rather difficult (Horton, 2000; McDonough & Shaw, 1997). Like the traditional classes, one possible solution, as Taylor (1981) discusses, is to get the e-learners familiar with the process of online materials adaptation and as the results improve their attitudes toward online language learning.

This can be realized through developing instructional e-materials which best suits the EFL/ ESL learners, and coordinates foreign language instruction on an e-campus basis. That way, educators can assure themselves that the Online environment is quite motivating and the e-learners’ ability will be improved (Wu, Yen, & Marek, 2011).

“Materials development is a cyclic process that never ends” (Ghassemi, 2013, p. 1). In other words, at no stage, the appropriateness of the developed materials for any particular group of learners can be ensured. Thus, scholars suggests a multidimensional approach to materials development (Tomlinson, 2001, 2012).
This approach toward materials adaptation will expand e-learners' and e-teachers' understanding of the process (Nunan, 1993). As the results, the educators believe it leads to consistency among the following variables of any learning/teaching setting:

- Context (national, regional …)
- Learners (age, language level …)
- Teachers (personality, teaching styles …)
- Materials (text, tasks …)
- Purpose and objectives (course syllabus …)

(Masuhara, 2004, pp. 1-3)

1.1 Problem Statement

Most portion of the time in each class is spent on reading. However, many e-learners can’t do the reading tasks successfully because they can’t recognize connections among sentences in a text (Yeh, Yang, & Wong, 2010). It stem from the fact that many e-learners do not play active role to manage learning for effectiveness (Yang, 2002). The problem here is with the procedures, activities, and materials adopted for the purpose of commercially publishing materials (Saraceni, 2003). A proper reading material, as reported by Amory (2010), “supports … the processes of material production” (p. 76).

Empirically, carrying out such a study may improve our knowledge of the process of online reading comprehension. Teachers, curriculum designers and even students might benefit from the results of such a study. That way the educators can help learners be equipped with reading skill. As the results, one can expect to enhance their learning via reading. In other words, they will be encouraged to use the online materials (Tomlinson, 2012). In so doing, it apparently is essential to investigate the types of Strategies and techniques available to the curriculum and material developers to help e-learners improve their reading comprehension.

As J. C Richards (2010) argues the core source in any language program is the learning material. Thus to ensure ourselves that the designed materials best suit learners’ interest is to consider these strategies and techniques while undertaking the material development (Brown, 2001).
Moreover, it will bring about a positive emotion in the learners. In addition to enjoying high face validity, cooperatively-adapting (teacher and students) e-materials leads to a consistency in gathering divergent opinions at times convenient to the participants.

Hence such teamwork in materials adaptation guarantees the success of the program. Yet the notion of developing and delivery of e-materials is still controversial in the field of language teaching and learning (Tomlinson, 2012). In view of it, some researchers have done a number of studies on e-course design, e-materials development and strategy training. Hoping to help learners to become autonomous, they mostly explore the e-learners’ attitude and strategies employed by the teachers.

1.2 Review of Related Literature

Wu et al. (2011), in a survey-design study, tried to explore the effect of integrating technology into the language classes on the ability, confidence and motivation of the learners. In addition, they used factor analysis and structural equation modeling to predict the most beneficially affecting elements on the learners’ ability and motivation. They argued that “even a small amount of authentic interaction in English made students more comfortable in applying their skills, more confident in what they learned, and more inspired to make global, cross-cultural connections” (p. 118).

In an attempt, Plana, Gimeno, and Appel (2013) investigated the benefits and drawbacks of the messenger applications, WatsApp, on the improving leaners’ reading skills. They provided the participants the tasks through sending them via WatsApp. Having conducted the study, they concluded that there was a high level of satisfaction among the students. Some studies have been done to explore how the motivation of e-learners can be improved. Huang (2013) tried to probe the distinct patterns of motivation among EFL e-learners. During the study, he provided the participants a book online weekly.

Having employed a quantitative and quantitative methods, he argued that learners improved their image of themselves as readers and expressed more designer to read e-books. To explore the effect of synchronous online interaction on e-learners’ writing, Liang (2010) implemented environmental analysis of the online discourse.
Based on the findings, it was suggested that the online activity possibly will not guarantee the revision. Thus the teachers’ creativity to use tasks related to the online discourse is paying important role to trigger error correction and meaning negotiation among the e-learners.

All the directly above studies have been done to improve the attitudes of the e-learners and as the results facilitate their involvement into the comprehension performance tasks. However, e-learners’ needs should also be considered. The e-learners’ needs differ from one another in different situations. To ensure that the needs identified undoubtedly meet those of e-learners, materials developers and teachers are required to get familiar with the e-learners’ needs, interests, and preferences. Gathering such data increases the probability of meeting such needs.

1.3 Research Questions

For the purpose of the present study, Reading as a macro-skill (Nunan, 1993) and e-materials adaptation (an important stage in the process of curriculum development) are adopted as the starting point. Thus e-materials adaptation is planned to interest e-learners and involve them into the learning program.

So based upon such an assumption, the present study was designed to investigate whether peer cooperative e-material adaptation has any impact on reading comprehension. In order to give direction to the present study, the question blow was formulated:

Does peer cooperative reading e-materials adaptation have any effect on genre-based reading comprehension (news and academic papers) of Iranian EFL learners?

This directive question aims to touch one of the aspects of a receptive skill which, according to Tomlinson (2012) “very little of existing literature... tells us about the effect of types of material development on language learning” (p. 170).

He also argues that very few studies have been carried out on how teachers and learners can be encourage to use types of materials adapted based on innovative approaches including electronic ones.
Such a gap in the literature stems from the fact that few inquiries have focused on the new literacies of online reading comprehension and encouraging e-learners use the materials (Huang, 2013; Indrianti, 2013; Iwahori, 2008; Leu et al., 2007; Tomlinson, 2012).

2. Methodology

2.1 Participants

With a quasi-experimental pretest posttest control group design, the fieldwork was carried out in Noor Language Center where 90 participants were selected. The participants were both females and males. To select the sample population, the participants had to meet the following criteria. 1) All the volunteers had to already enroll in the online course. 2) The volunteers were required to sit TOEFL iBT (2010-2011) before their participation in the study. 120 students were given the TOEFL iBT. Based on their scores obtained on the proficiency test (TOEFL iBT), those who clustered around the total mean were selected. From among 90 students selected, 60 students were assigned to the experimental group. The experimental group included two subgroups with 30 students each. Then the remaining students (30 students) were considered as the control group. Age range of participants was from 21 to 26. They were all senior students who were studying at the 14th term. The term is the highest level of general English before the students can attend the TOEFL preparation course. Thus, they all enrolled in a four-credit online course in general English.

In the present study, peer cooperative e-materials adaptation and genre-based reading (news and academic article) were considered as independent variables; the other hand, e-learners’ reading comprehension performance as the dependent variable.

2.2 Instruments

The instruments used in the present study include a standardized TOEFL test (adopted from Kaplan TOEFL iBT 2010-2011), the reading comprehension section of the test (TOEFL) used as the “pretest” and “posttest.” Added to the major instrument and to control some of the variables, which might have influenced validity of the study, a teacher’s guide as well as an informal observation, were also employed.
The second instrument, Teacher’s guide, was taken to ensure that class practices exercised by the teachers in the class were the same for comparability purposes. Not to offend experienced teachers and/or overload teachers’ minds with much detail, items included in the teacher’s guide were put into words as suggestions. Thus, attempts all were made not to list much detail of the steps required to be taken in different phases of each lesson.

Still, the researchers had to see whether or not the teachers were adhering to the guideline already provided. Therefore, another measure which was taken to safeguard the consistency in handling the treatment was an informal observation. In so doing, the researchers attended the classes themselves without prior notice.

Next, the TOEFL iBt test was administered for the pretest. While sitting it, the e-learners had to answer 122 multiple-choice items, with 50 items in the listening section, 26 items in the use of English and reading comprehension with 46 items. This later test was administered to assess language as well as reading proficiency level of the e-learners.

Finally, a posttest was used to measure the possible achievement of the e-learners after the treatment. In order to investigate if there is any change in the reading performance of the e-learners, a standardized reading comprehension test was used. The section of the TOEFL iBt, used as the pretest and in which 46 items were included was once again administered to all three groups.

2.3 Procedure

The researchers took the following steps in order to do the present study. Firstly, the proficiency test (TOEFL iBt) was administrated in the first session of the term. It served two purposes. In addition to measuring the general language proficiency, it was going to assess reading proficiency level of the e-learners. That way, it could be ensured that the proficiency level of all subjects was roughly the same. Having done it, the homogeneity of the experimental and control groups was assured.

Having assured the homogeneity of the subjects, the test tried to select 90 subjects in the available online classes.
Only those subjects whose scores fell one standard deviation above and below the total mean were selected. Then they were randomly assigned to one control and two experimental groups.

The reading part of the TOEFL iBT test was also exercised as the pretest. Then the same part, which was used as the pretest, was once again employed as the posttest. The purpose of administrating pretest and posttest was to observe the possible changes that might have occurred in the reading ability of the e-learners.

The experimental groups took the treatment, which comprised of some assignments for teaching reading comprehension. These assignments were different from what the control group received in normal teaching/learning procedures. The control group was exposed to reading texts commercially produced, which were read and reread followed by comprehension activities.

The experimental groups, on the other hand, were provided the reading e-materials that are news and academic papers. The e-materials were all selected by the e-learners themselves. To design the activities, the model proposed by Brown (2001, pp. 313-316) was applied.

The researchers made all their attempts to have relatively the same condition in all classes over the treatment period. For such a purpose, they asked the teachers to accomplish the reading tasks in line with the checklist provided to them.

In order to see if the same procedures were followed to teach the materials and if the teachers were adhering to the checklist provided to them while holding the classes, informal observations were performed. The criteria for conducting observation were the items included in the checklist. The observations showed that all the teachers were adhering to the guidelines in the checklist.

In the study, the teacher played the role of a consultant in the experimental groups. In other words, the teacher, at the beginning of the experiment, introduced the principles and standards needed to be paid attention to while adapting reading e-materials in a briefing session and a one day workshop. Then, during the process of e-material adaptation, he was available to the e-learners for consultation. On the other hand, the teacher, in the control group, was the only source of information.
3. Results and Discussion

To check the homogeneity of the groups, Descriptives was the first statistical analysis done. Since in Iran the scoring range is from 0 to 20, all subjects' scores were converted to fit this system. The results are shown in table 1.

**Table 1: The Descriptives of the scores in the TOEFL iBt**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>No of Items</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>122</td>
<td>15.78</td>
<td>2.11</td>
<td></td>
</tr>
</tbody>
</table>

Based on the result of Descriptive statistics, only those students whose scores fell one standard deviation above and below the total mean were selected. Thus, 90 students out of 120 were selected to participate in the study. Afterward, they randomly were assigned to three groups (one control and two experimental groups). To assure the intra-homogeneity of the groups, the Descriptive static was once again run fro each group. Table 2 summarizes the results. As the table 2 shows, the mean and variance of the three groups with thirty members each are about the same, so the three groups can be considered as homogenous.

**Table 2: Descriptive Statistics of Proficiency Test**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXP-G 1 (ac-paper)</td>
<td>30</td>
<td>15.89</td>
<td>2.05808</td>
</tr>
<tr>
<td>EXP-G 2 (News)</td>
<td>30</td>
<td>15.46</td>
<td>2.17126</td>
</tr>
<tr>
<td>Control-G</td>
<td>30</td>
<td>15.68</td>
<td>2.17559</td>
</tr>
</tbody>
</table>

In order to test reading ability of these groups, the scores obtained in the reading section of the TOEFL iBt were fed into SPSS. The results are presented in table 3.

**Table 3: The Descriptives of Reading Proficiency Test**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp-G 1(ac-paper)</td>
<td>30</td>
<td>16.10</td>
<td>2.06018</td>
</tr>
<tr>
<td>Exp-G 2 (News)</td>
<td>30</td>
<td>15.94</td>
<td>2.02834</td>
</tr>
<tr>
<td>Control G</td>
<td>30</td>
<td>16.12</td>
<td>2.05473</td>
</tr>
</tbody>
</table>
From the summarized data in table 3, it can be concluded that the groups have rather the same total Mean and Standard Deviation. It, thus, indicates the homogeneity of the groups as far as reading ability is concerned.

The next attempt was made to answer the research question. In so doing, the gain score was calculated for each student. The calculated Gain score shows 14% improvement on the e-learners’ reading achievement. Hence, to see whether or not the difference between the mean score of the three groups was significant, from the Compare Mens in SPSS v 16, One-Way ANOVA was run on the gain score. At 2 and 87 degrees of freedom, the P value was smaller than .05 (table 4).

**Table 4: The Results of One-Way ANOVA for the Gain Score**

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>63.33</td>
<td>2</td>
<td>19.83</td>
<td>.00</td>
</tr>
<tr>
<td>Within Groups</td>
<td>138.879</td>
<td>87</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results obtained from One-Way ANOVA indicated that the differences between the mean scores of these three groups were significant. Yet, this result does not pinpoint where the real differences exactly lie.

Therefore, to uncover where the mean scores of these groups were significantly different, Tukey, a Pos Hoc comparison of means, was run.

**Table 5: The summary of Multiple Comparisons for the Posttest**

<table>
<thead>
<tr>
<th></th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% Confidence Interval</th>
<th>Confidence Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp-G 1(ac-paper)</td>
<td>Exp-G 2 (News)</td>
<td>.07333</td>
<td>.32622</td>
<td>.973</td>
<td>-.7045 - .8512</td>
</tr>
<tr>
<td>Control G</td>
<td>1.81500*</td>
<td>.32622</td>
<td>.000</td>
<td>1.0371 - 2.5929</td>
<td></td>
</tr>
<tr>
<td>Exp-G 2 (News)</td>
<td>Exp-G 1(ac-paper)</td>
<td>-.07333</td>
<td>.32622</td>
<td>.973</td>
<td>- .8512 - .7045</td>
</tr>
<tr>
<td>Control G</td>
<td>1.74167*</td>
<td>.32622</td>
<td>.000</td>
<td>.9638 - 2.5195</td>
<td></td>
</tr>
<tr>
<td>Control G</td>
<td>Exp-G 1(ac-paper)</td>
<td>-1.81500*</td>
<td>.32622</td>
<td>.000</td>
<td>-2.5929 - 1.0371</td>
</tr>
<tr>
<td></td>
<td>Exp-G 2 (News)</td>
<td>-1.74167*</td>
<td>.32622</td>
<td>.000</td>
<td>-2.5195 - .9638</td>
</tr>
</tbody>
</table>
Table 5 shows that there is a significant difference between the Control group and Experimental (News) and Experimental (academic paper) ones at the level of 0.05. However, tables indicate that the two experimental groups are not significantly different.

The abovementioned results show that cooperative e-materials adaptation significantly affected the reading comprehension performance of language e-learners. Meeting the e-learners' needs and being interesting to them, may be the reason such a significant difference. Thus it consequently fostered learners' participation. Successively, the teacher will perceive an improvement in e-learners' gain scores. During the present study, the subjects in the experimental groups, unlike those in the control group got a chance to adapt reading e-materials cooperatively. Then, they accomplished the tasks given to them better than their counterparts in the control group. It emphasizes the necessity of getting those who are to use the reading e-materials involved in the process of e-material adaptation. That way, adaptation ensures meeting the true needs of the students and they can be encouraged to use the e-materials (Tomlinson, 2012; Tomlinson, Dat, Masuhara, & Rubdy, 2001).

The findings support the earlier studies carried out on different aspects of getting learners involved in the process of learning e-materials adaptation. Conducting a qualitative study, Coiro and Dobler (2007) reported that reading printed and digital texts require different cognitive processes. Then they argue that successful e-readers employ inferential reasoning, prior-knowledge, and self-regulatory strategies. Finally they conclude that increasing the e-readers' awareness of such process will help them apply these strategies and consequently improve their reading performance.

Wu et al. (2011) conducted a study to investigate the effect of online interaction on learners' ability. They used mainly online videoconferencing with the natives. They discussed that the integrating online technology had long-term changes in learners' ability, confidence as well as motivation.

In another study, Aydin (2007) explored the role of learners' attitude in online language learning. He argued that through improving the attitude of the learners toward the Internet, one can expect more participation on the part of the learners.
Finally, the findings go in line with a study done by Liang (2010). She used synchronous online interaction to among peer groups. Based on the reported results, online interaction had a positive impact on the writing ability of the learning. Such an improvement was achieved through synchronous meaning negotiation and error correction. Yet there is still a need for the proactive model related to online discourse by the teachers.

According to the findings of the study, peer cooperative e-materials adaptation functions as an enhancer in different stages of reading comprehension teaching as well as development of reading skill. This can be a strategy which may help the teachers encourage EFL e-learners to participate in online reading activities.

However, holding a briefing session seems to be essential. During the briefing session some major issues in learning are introduced and discussed. Consequently, e-learners’ awareness was improved at the end of such a session. The second outcome was the adoption and adaptation of e-materials best suited e-learners’ needs and interest. Subsequently, peer cooperation increased learners’ participation, collaboration and a sense of achievement.

Still, it doesn’t mean that the burden of material adaptation should only be carried by the e-learners. It refers to the fact that what e-learners do is required to be enhanced and improved by the support on the part of experienced e-teachers. In other words, grading, tailoring, and providing materials related to online discourse should be undertaken by professionals including materials developers, teachers, etc. previous studies have confirmed the effectiveness of such a procedure (Liang, 2010). On the other hand, learners’ involvement in the process of materials adaptation as a teaching/learning strategy may offer some potential advantages to enhance online reading comprehension.

4. Conclusion and Implications

Academically speaking, the results of this study are expected to modify our knowledge of the nature of e-materials adaptation. Through adaptation process, e-learners can not only see the use of language, but the input they receive also will be improved culturally (Alalou & Chamberlain, 1999; Boyd & Ellis, 2013). One thing that weakens online reading comprehension is because of the e-learners’ unwillingness to participate in the process.
One possible solution is to get the e-learners involved into the process of materials adaptation with the support of teachers. Firstly, it serves the online reading courses as an enhancer as it is motivating and encouraging. Hence, they inevitably become completely involved in learning the new language. Secondly, while adapting reading e-materials, meeting the true needs and interests are guaranteed. Thirdly, adapting lets the students be adventurous with the language. Ultimately, we can expect a rich culturally input as soon as the process ends.

In fact, learning a new language by encouraging e-learners to get involved readily in reading tasks is only one side of the coin. Teachers’ and material developers’ ability to recognize the problematic areas in reading online through the process of adaptation is the other side. Pragmatically, the strategic application of peer cooperative e-material adaptation has also a positive backwash effect on e-teaching. In short, teachers can easily try to remove obstacles through perceiving the knowledge gaps. Knowing it, the material developers and teachers can adapt effective reading e-materials. Thus, the syllabus designers and material developers seemingly have to carry the responsibility of getting e-learners involved in the process of material adaptation.

Hopefully, the present study is just the beginning not the end. More inquiries are needed to focus on deepening our understanding of different issues of online learning. These investigations should include the effect of different proficiency levels, language skills, and genre on e-learners’ participation, attitude and subsequently their performance.

References


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