The Effect of Concept Mapping and Anticipation Guides on EFL Learners' Reading Comprehension

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ABSTRACT

Finding a technique that helps the learners become more proficient readers in English is a very important issue. In this research, the effect of two pre-reading activities, namely anticipation guides and concept mapping, were compared on Iranian EFL learners' reading comprehension. For this purpose, 90 EFL learners at elementary level of proficiency in English were chosen based on convenient sampling to take part. Based on the results from Solutions Placement Test of homogenization, they were assigned to three groups of 30 students. Before the treatment, a pretest of Preliminary English Test (PET) was administered. During the treatment, in one of the experimental groups, the concept mapping technique was used as pre-reading activity, in the other experimental group, anticipation guides were used for pre-reading, and in the control group, no pre-reading activity was used. The course took 10 sessions. After the treatment, another PET test was administered as the posttest and the results were compared with the pretest. The results of data analysis (ANOVA) showed that 1) concept mapping had a statistically significant effect on learners' reading comprehension, 2) anticipation guide had a statistically significant effect on learners' reading comprehension, and 3) there was no significant difference between the effects of concept mapping and anticipation guide on learners' reading comprehension. Pedagogical implications for EFL teachers, institutes, materials developers and syllabus designers are also discussed, indicating that pre-reading activities are very important in the process of reading comprehension.

Keywords: Anticipation guides; Concept mapping; Pre-reading activities; Reading comprehension.

1. Introduction

Finding a technique that helps the learners become more proficient readers in English is a very important issue. Many research studies have tried to find which technique works best in which situation or which country or which level of proficiency in English. In Iran, teaching reading has been the main focus in TEFL learning contexts, since English is a required subject for students who want to enter higher education. So far, a number of studies have tried to find out how students' reading could be facilitated. In recent years, this issue has been under investigation in a number of studies (Fahim & Hoominian, 2014; Adhami & Marzban, 2014; Maher, 2015).

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In Iran, teaching reading has been the main focus in TEFL learning contexts, since English is a required subject for students who want to enter higher education. So far, a number of studies have tried to find out how students' reading could be facilitated. Meanwhile, there are few instances of comparing the effects of concept mapping and anticipation guides on the learners' reading comprehension. Furthermore, studies on pre-reading activities and their effects have not been studied much in the literature. Therefore, this study is aimed at finding the difference between these two techniques of reading as pre-reading activities to improve the learners' reading comprehension.

2. Literature Review

Most scholars in the domain of reading now concentrate on the efficient reading methods that enhances the learners" comprehension. Guthrie (1996) contends that most researchers inspect a single cognitive system, instead of performing a long-term investigation of various methods. In addition, few studies have inspected the issues related to "motivation" and "engagement" regarding reading comprehension. As Guthrie (1996) points out:

"Engaged reading is based on motivational and cognitive characteristics of the reader…who is intrinsically motivated, builds knowledge, uses cognitive strategies, and interacts socially to learn from text. These engagement processes can be observed in student's cognitive effort, perseverance, and self-direction in reading" (p. 404).

It is the instructor's duty to motivate reading by selecting the suitable materials and particularly for those at the early phases of learning. Guthrie and Humenick (2004) utilized several aspects of intrinsic motivation for reading comprehension in their research. They concluded that meaningful conceptual content in reading instruction increases motivation for reading and text comprehension. They also concluded that the participants who were given the choice of text, performed higher on reading tasks than those with no choice.

The next key element that effects on the students' reading comprehension is using interesting texts. This conforms to Hedge's (2003) idea that in selecting task texts, instructors should search for interesting texts and consider many different topics. As Hedge (2003) points out, "Readers' interest can be revealed by setting a reading interest questionnaire, where students check the fields that suit their interest, i.e. short stories, thrillers, science fiction, etc." (p. 205).

In addition, concept mapping or semantic mapping is a technique of teaching and learning vocabulary in which related words can be considered neighbors in a chart. In this technique, learners, with the help of teacher draw the distance between thousands of words (Dilek & Yürük, 2013). In this technique, learners choose which words lead from a given initial word to the target word, creating a visual map of the distances between words.

The invention of the technique goes back to 1990, Novak developed a research project that forced his development. By1974, concept mapping was a useful tool to help the learning of scientific theories, for the design of interviews, analysis of interview data, as a resource for the communication of scientific knowledge (Marqués & Pelta, 2017). Concept mapping became a tool for psychological and educational research, teaching, learning and evaluation (Roth & Sanford Bernhardt, 2016). Novak developed the technique from the theoretical perspective provided by Ausubel's (2002) theory of meaningful learning.

On the other hand, anticipation guide technique of teaching vocabulary developed by Readence, Bean and Baldwin (2004) consists of a series of expositions about a particular text destined to be read. This strategy is intended to activate prior knowledge and give students a purpose for reading. Its elaboration is challenging for the educator because the approaches should stimulate students to think.

Anticipation guides can be used by all students at any level. They are generally more useful with expository texts but can also be used with narrative texts. This type of strategy is effective when students have false conceptions in their prior knowledge; interacting with the text and comparing

their opinions or beliefs with what they learned through reading are more likely to correct their misconceptions.

A number of similar studies have been carried out in the context of Iran and other countries about the effects of the two techniques and how to improve reading comprehension. In a similar study, Ortlieb (2013) conducted a study on using anticipatory reading guides to improve elementary students' reading comprehension. In his experimental research, he included 24 Grade 3 students in Texas and divided them into two groups of treatment (n=14) and control (n=10). His subjects in the treatment group were taught through anticipation guide, and those in the control group were taught reading through "traditional classroom instruction" (p. 152). Findings of his research study showed that the experimental group performed significantly better than the control group in reading comprehension test.

In another study, Andriyani and Aruan (2016) investigated the effect of anticipation guide on eleventh grade students' reading comprehension. They included 50 eleventh grade students and divided them into two groups of experimental and control. They taught anticipation guide to the experimental group and traditional reading comprehension style to the control group. They found a significant effect of anticipation guide on students' reading comprehension.

In the Iranian context, Roozkhoon and Rahmani (2013) investigated the effect of employing anticipation guide as a pre-reading strategy on EFL learners' comprehension. They included 40 intermediate female learners and divided them into two experimental groups and one control group. The experimental group received anticipation guide but control group did not receive any treatments. They found that "using anticipation guide had positive effect on Iranian EFL learners' comprehension of culturally unfamiliar texts" (p. 45).

Roy (2017) investigated the effects of applying learner constructed Cmap tool on EFL learners' reading comprehension performance. To conduct the study, 77 upper-intermediate university students were selected non-randomly and were assigned randomly into paper-and-paper Cmap and electronic Cmap groups. They were trained to create concept maps by CmapTools software. Besides, an interview was applied to elicit the attitudes of participants toward computer assisted language learning. Conducting parametric statistics, the performances of the groups on the pretest and posttest were compared, and the results revealed that the technology-based Cmap group outperformed the paper-and-paper Cmap group. The technology-based group asserted their learning was facilitated and their motivation boosted.

Another study that was carried out in the Iranian context is that of Beydarani (2015) who studied the effect of concept mapping on reading comprehension of EFL learners employing persuasive and descriptive texts. She included 52 learners and assigned them into two experimental and two control groups. The learners in the experimental groups received concept mapping, while learners in control groups received no treatment of concept mapping. The results of comparing pretest and posttest showed that the learners in the experimental groups performed significantly better than the learners in control groups in reading comprehension.

Meanwhile, there are few instances of comparing the effects of concept-mapping and anticipation guides on the learners' reading comprehension. Furthermore, studies on pre-reading activities and their effects have not been studied much in the literature. Therefore, this study was aimed at finding the difference between these two techniques of reading as pre-reading activities to improve the learners' reading comprehension. To address this gap, the following research questions were formulated:

1. Does concept mapping have any statistically significant effect on learners' reading comprehension?

2. Does anticipation guide have any statistically significant effect on learners' reading comprehension?

3. Is there any statistically significant difference between the effects of concept mapping and anticipation guide on learners' reading comprehension?

3. Methodology

3. 1. Participants

For the purpose of this study, 90 EFL learners were chosen from among 7th grade students in a high school in Saveh, Iran. The participants were chosen non-randomly from among those high school learners who were at the elementary level of proficiency in English. The ages of the participants ranged from 13 to 14 years old and they were chosen based on convenient sampling.

After homogenization, the participants of this study were divided into three groups, two of which were experimental groups and the other one was the control group. The treatment was different for each group to compare the results of reading comprehension test among them after the treatment. One of the experimental groups was taught reading through concept mapping pre-reading activity, while the other experimental group was taught through anticipation guide. In the control group, however, no pre-reading activity was used before doing the reading exercise.

3. 2. Materials and Instruments

The first instrument that was used in this study to homogenize the learners was the *Solutions Placement Test* designed by Edwards (2007) and published by Oxford University Press which was found online. This test was used to make sure that the learners were at the same level of proficiency in English language. The following rubric score is proposed by the test itself to determine the level of the participants: 0-20 elementary, 21-30 pre-intermediate, 31-50 intermediate.

The other instrument that was used in this study was the course book of the learners, which was *Touchstone 1* Second Edition by University of Cambridge. It is co-authored by McCarthy, McCarten and Sandiford (2014). Touchstone is a four-level series for adults and young adults, taking students from beginning to intermediate levels. Touchstone series covers CEFR: A1–B1, and Touchstone 1 is level A2 (elementary level) of the course book that was used in this study.

In addition, this study had pretest of reading comprehension that was taken from Cambridge Preliminary English Test (PET) to test the learners' reading comprehension level in English before the treatment. This test was given to the learners in the three groups at the first session of the class. The Preliminary English Test is at level B1 (intermediate level) of the Common European Framework of Reference for Languages: Learning, teaching, assessment published by the Council of Europe. Reading section include 35 questions in five parts.

This study also had a posttest of reading comprehension after the treatment to see if the learners changed in their reading comprehension levels after the treatment. The performance of the learners in the three groups was compared with each other based on this test. This test was also a PET test, but different from the pretest taken from the PET handbook discussed above.

3. 3. Procedure

First, 90 EFL learners at elementary level of proficiency in English were chosen to take part. They were homogenized with a Solutions Placement Test. After a test of homogenization, they were assigned to three groups of 30 students. Each of the groups was given a different treatment. For the first group, concept mapping was used, in the second group anticipation guides was used and for the third group, which was control group, no pre-reading activity was used.

Before the treatment, a pretest was taken from the students to find out their level of reading comprehension before the treatment. This was important to know what the level of the participants was before the treatment and to see how much their reading ability changed during the treatment.

During the treatment, in one of the groups, the concept mapping technique was used as pre-reading activity, in the other experimental group, anticipation guides was used for pre-reading and in the control group, no pre-reading activity was used. The course took 10 sessions, each having 1.5 hours of time.

Bean, et al. (2011, p. 63) suggest eight steps to develop and use anticipation guides:

> • Identify the main concepts. Review the text to identify the main concepts or the

main ideas that should be learned.

• Determine students' prior knowledge of these concepts. Encourage them to become aware of what they know about those concepts or ideas.

• Create approaches. Use the information obtained in the two previous steps and write on the blackboard or on the overhead projector screen, four to eight approaches designed for students to react to them. The number of approaches depended on the amount of text to be read, the number of concepts included and the reading level of the students. The approaches reflected information about a part of the knowledge of the students but not complete knowledge. They were brief but without falling into the true-good style. Some good examples for a chapter on health and nutrition could be the following:

Where the sun enters, the doctor does not enter.

If you want to live 100 years, be a vegetarian: True/False

• Decide on the order of the approaches and the mode of presentation. Sequence the approaches according to their order of presentation in the text and insert spaces for the answers. Create a set of instructions. Decide whether the guide should be answered individually or in groups and whether it will be presented in the projector, on the board or on individual sheets.

• Present the guide. Ask the students to react to each approach, indicating their agreement or disagreement. Tell them that they will share their answers with the group below.

• Briefly discuss each approach. Encourage students to show and comment on their opinions.

• Ask them to read the text with their opinions in mind. As they read, students should think about the relationships between the text and the guidelines in the guide.

• Conduct a post-reading discussion. Ask each student to reread his initial response and reformulate it in light of what he learned from the text read. Encourage them later to discuss the approaches, focusing on the permanence or change of their ideas and opinions. The example shown below presents an anticipation guide.

As recommended in Vacca and Vacca (1981, p. 198), these guidelines need to be kept in mind while creating, constructing, and implementing anticipation guides:

1.Analyze the material to be read. Determine the major ideas - implicit and explicit - with which students will interact.

2.Write those ideas in short, clear, declarative statements. These statements should in some way reflect the world in which the students live or about which they know. Therefore, avoid abstractions whenever possible.

3.Put these statements in a format that will elicit anticipation and prediction.

4.Discuss the students' predictions and anticipations before they read the text selection.

5.Assign the text selection. Have the students evaluate the statements in light of the author's intent and purpose.

6.Contrast the readers' predictions with the author's intended meaning.

For the concept mapping group, the following steps were taken.

In the control group, however, no pre-reading activity was used before doing the reading exercise. In this group, the teacher first wrote the new words on the board and explained the new vocabulary to them. After pre-teaching the blocking words, the teacher set a time limit for learners to start reading. After the reading, the learners discussed their understanding with each other and then the teacher asked them some general and detailed questions to check their understanding. Then the learners proceeded with answering the comprehension check questions that were given

in their books.

After the treatment, a posttest was taken and the results were compared with the pretest to see which group performed better. The results of this posttest were compared with the results of the pretest. Comparing the pretest with the posttest in each group helped the researcher to find out the degree that each group performed better or worse than the other groups.

4. Results

For the purpose of data analysis, first the normality of the data was checked, followed by the homogeneity of variances. After meeting the assumption, two one-way analysis of variance (ANOVA) were run to test the difference between the three groups in their pretest and posttest, as required by the third research hypothesis. Furthermore, three paired-samples *t-tests* were run to investigate the first two research hypotheses.

The validity of all of the tests that were used in this study was approved by two scholars in the field. In order to make sure that the instruments that were used in this research were reliable, split-half method was used for measuring internal consistency of the tests. The method was used on 30 students' papers. Reliability measures of both Solutions Placement Test and Preliminary English Test were investigated. The results for the reliability of PET test showed that the correlation between the two halves was .961, which shows that the correlation is significant at the 0.01 level. Furthermore, the correlation between the two splits of the Solutions Placement Test is .892 and it shows that correlation is significant at the 0.01 level.

Then the assumptions of the ANOVA test were tested and the normality of the pretest showed a significant value of .513 for concept mapping, .271 for anticipation guide and .23 for control group, and the homogeneity of variances showed value of .866. For the posttest, the normality tests showed a value of .47 for the concept mapping group, .1 for the anticipation guide group and .106 for the control group, and the homogeneity of variances of the posttest showed a significant value of .061. The results of the one-way ANOVA are as follows:

Table 1. *Descriptive Results of the Pretest*

	N	M	SD	SE	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
concept mapping	30	25.23	4.79	.87	23.44	27.02	20.00	35.00
anticipation guide	30	27.26	4.63	.84	25.53	28.99	21.00	35.00
Control	30	27.36	4.89	.89	25.53	29.19	20.00	35.00
Total	90	26.62	4.82	.50	25.61	27.63	20.00	35.00

Table 1 shows the descriptive statistics such as mean, standard deviation, minimum and maximum of scores in all three groups. The mean score of the concept mapping group was 25.23, the mean of anticipation guide was 27.27, and the mean of control group was 27.37. To see if these mean differences are significant, the one-way ANOVA test in Table 4.8 shows the results.

Table 2. *One-way ANOVA of Pretest*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	86.95	2	43.47	1.90	.15
Within Groups	1984.20	87	22.80		
Total	2071.15	89			

As shown in Table 2 above, there is no significant difference between the three groups and the Sig value is .16. Therefore, it can be concluded that the groups were not significantly different from each other in terms of reading comprehension before the treatment. To investigate the first two research hypotheses, three paired-samples t-tests were run. Then a one-way ANOVA was run on the posttest results. The results of the paired-samples t-test to check if each group had a significant difference in the posttest compared with their own pretest are presented in Table 3 below.

Table 3. *Descriptive Statistics of Paired Samples for the Three Groups*

		M	N	SD	SEM
Pair 1	conceptpre	24.80	30	4.67	.85
	conceptpost	30.43	30	3.49	.63
Pair 2	anticipre	27.26	30	4.63	.84
	anticipost	31.16	30	4.00	.73
Pair 3	controlpre	27.36	30	4.89	.89
	controlpost	27.60	30	4.93	.90

Table 3 above shows the mean and standard deviation of the three groups in their pretest and posttest. To see if these means are significantly different in each of the three groups between their pretest and posttest, the main results of the paired-samples t-test is presented in Table 4 below.

Table 4. *Paired Samples Test and Paired Differences*

		M	SD	SEM	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	conceptpre - conceptpost	-5.63	2.72	.49	-6.64	-4.61	-11.33	29	.00
Pair 2	anticipre - anticipost	-3.90	3.32	.60	-5.14	-2.65	-6.42	29	.00
Pair 3	controlpre - controlpost	-.23	2.37	.43	-1.11	.65	-.53	29	.59

Table 4 above shows that there was a significant difference between the pretest and posttest of the concept mapping group. This means that the concept mapping group improved in their reading comprehension scores after the treatment as compared to their own scores before the treatment (p = 0). Therefore, the first null hypothesis, "Concept mapping does not have any statistically significant effect on learners' reading comprehension" **was rejected**. It can be concluded that concept mapping had a statistically significant effect on learners' reading comprehension.

In addition, the results show that there was a significant difference between the pretest and posttest of the anticipation guide group. The significance value (p = 0) indicates that the second null hypothesis, "Anticipation guide does not have any statistically significant effect on learners'

reading comprehension" was also rejected. It can therefore be concluded that anticipation guide had a statistically significant effect on learners' reading comprehension.

However, this was not the case for the control group. The results of the paired-samples t-test for the control group showed that there was no significant value (p = .59). This means that the control group's scores did not change significantly from pretest to posttest. It can therefore be concluded that the control group did not show any statistically significant improvement in the learners' reading comprehension.

To investigate the third research hypothesis which was aimed at finding out if there is any statistically significant difference between the effects of concept mapping and anticipation guide on learners' reading comprehension, a one-way ANOVA procedure was carried out. The results of the data analysis and the actual results of the one-way ANOVA are presented in Table 5 below.

Table 5. *One-way ANOVA on the Posttest Scores*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	212.86	2	106.43	6.08	.003
Within Groups	1522.73	87	17.50		
Total	1735.60	89			

As shown in Table 5 above, the difference between the mean score of the three groups is significant as indicated in Sig. value (p = .003). This significant value shows that there is a significant difference between the three groups. However, these results do not show exactly where the difference was. To find out the exact differences between the three groups, they were compared with each other in pair-wise comparisons through a post-hoc test. The post-hoc test of Bonferroni was also administered, the results of which are presented in Table 6 below.

Table 6. *Post-hoc Bonferroni test for Results of the Posttest*

(I) group	(J) group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
concept mapping	anticipation guide	-.73	1.08	1.00	-3.37	1.90
	control	2.83*	1.08	.031	.19	5.47
anticipation guide	concept mapping	.733	1.08	1.00	-1.90	3.37
	control	3.56*	1.08	.004	.92	6.20
control	concept mapping	-2.83*	1.08	.03	-5.47	-.19
	anticipation guide	-3.56*	1.08	.004	-6.20	-.92

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

As shown in Table 6 above, there was a significant difference between the results of the control group with concept mapping and anticipation guide groups. In other words, the mean difference between the control group and concept mapping group was significant (p = .03 < .05). In addition, a significant difference was found between the results of control group and anticipation guide (p = .0 < .05).

However, no statistically significant difference was found between the mean score of reading comprehension between the two experimental groups. In other words, those in the concept mapping and anticipation guide groups did not significantly differ from each other in the results of

the reading posttest. Therefore, it can be concluded that there was no significant difference between the two experimental groups (p = 1> .05). In conclusion, the third null hypothesis, "There is not any statistically significant difference between the effects of concept mapping and anticipation guide on learners' reading comprehension" was supported. The following figure depicts these findings in the form of means plot.
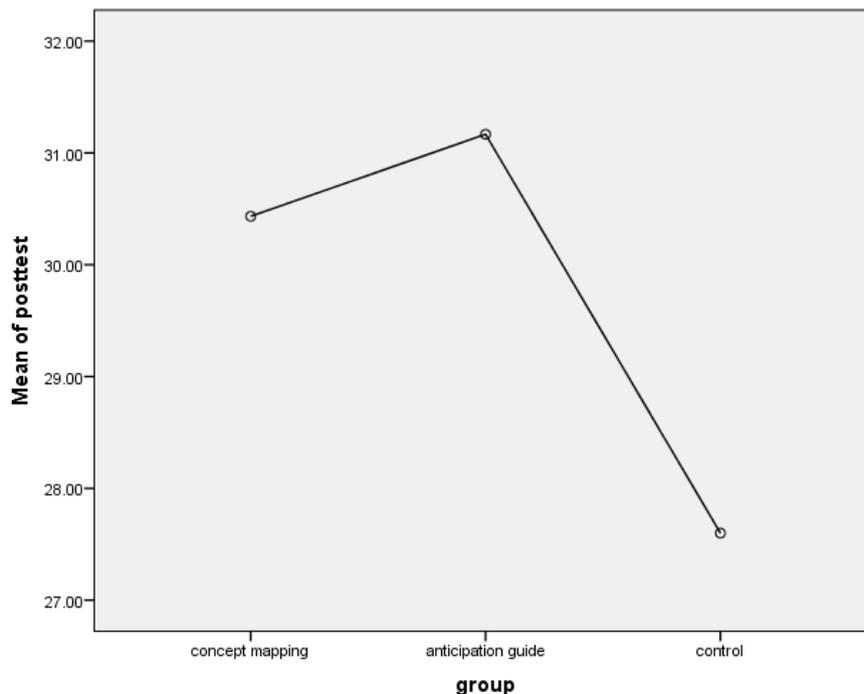

Figure 1. Means plot of the three groups in posttest scores

5. Discussion and Conclusion

The main aim of this study was to find out if two techniques of pre-reading can enhance Iranian EFL learners' reading comprehension. More specifically, this study sought to see if concept mapping and anticipation guide improved the learners' reading comprehension in the second language. The comparison of the results of pretest and posttest of reading comprehension between the two experimental and one control groups showed the following results.

Results can be interpreted from the point of view that pre-reading activities have a statistically significant effect on better reading comprehension in the learners. This is testified by the results of the interpretation of the data analysis section that both experimental groups in which pre-reading activities were taught were significantly better than the control group in which no pre-reading activity was used. Therefore, it can be concluded that pre-reading activities are a very good strategy for improving the EFL or L2 learners' reading comprehension.

The other interpretation that can be made from the results is that learners will benefit from both these two pre-reading activities used in the classroom by the teacher. Therefore, teachers can alternate between the two different techniques in the classroom to have a more dynamic, interesting class for learners, as opposed to using only one technique over the time. In other words, because this study found that there was no significant difference between the two pre-reading activities, both of them are useful, and teachers have the option of using either one of them in the classroom to have a more versatile classroom in terms of different pre-reading activities they use.

Results of this study are similar to some other studies in this field. One of these studies is that of Ortlieb (2013) who conducted a study on using anticipatory reading guides to improve elementary students' reading comprehension. His subjects in the treatment group were taught through anticipation guide, and those in the control group were taught reading through "traditional classroom instruction" (p. 152). Findings of his research study showed that the

experimental treatment group performed significantly better than the control group in reading comprehension test. The justification of the findings of the present study with that of Ortlieb (2013) is that both research studies found the positive effect of anticipation guide on the learners' reading comprehension performance. Therefore, both of them support the idea that pre-reading activities, in this case anticipation guide, is useful in helping learners develop a better reading comprehension skill.

In another study with similar findings carried out by Andriyani and Aruan (2016), the researchers investigated the effect of anticipation guide on eleventh grade students' reading comprehension. They included two groups of experimental and control. They taught anticipation guide to the experimental group and traditional reading comprehension style to the control group. They found a significant effect of anticipation guide on students' reading comprehension. Both the present study and that of Andriyani and Aruan (2016) indicate the fact that traditional reading comprehension style yields less desired results in comparison with pre-reading activities.

There was also another study with similar results. Roozkhoon and Rahmani (2013) investigated the effect of employing anticipation guide as a pre-reading strategy on EFL learners' comprehension. They included two groups experimental and control. The experimental group received anticipation guide but control group did not receive any treatments. They found that that "using anticipation guide had positive effect on Iranian EFL learners' comprehension of culturally unfamiliar texts" (p. 45). Therefore, it can be concluded that the results of the present study and the study carried out by Roozkhoon and Rahmani (2013) both emphasize the importance of using pre-reading activities to enhance the learners' reading comprehension skill.

Similarly, Beydarani (2015) studied the effect of concept mapping on reading comprehension of EFL learners employing persuasive and descriptive texts. She included two experimental and two control groups. The learners in the experimental groups received concept mapping, while learners in control groups received no treatment of concept mapping. Her study found that the learners in the experimental groups performed significantly better than the learners in control groups in reading comprehension. Results of the present study can be justified through the fact that concept mapping is a useful technique for the development of the skill of reading comprehension, which both studies mentioned here emphasize.

Furthermore, Aykac (2015) inquired about the availability of concept maps in Visual Arts Education lessons which are performed based on active learning methods. She applied it on 3nd grade students taking course of Special Education Methods lesson with 20 learners as 10 of them for group control and 10 of them for experimental group. Traditional method was applied to control group and concept mapping method to experimental group. In the end, she concluded that concept mapping group performed better than the control group. This is the same results that the present study found, which indicates that pre-reading activities, in this case concept-mapping, is an effective tool at the hand of the teacher to train learners be better readers in English.

In addition, Hwang, Kuo, Chen, and Ho (2014) investigated the effectiveness of the approach on students learning performance, learning satisfaction and cognitive load in an elementary school social studies course. The results of their study showed that the concept map integrated approach can significantly enhance the student's web browser approach in solving a problem. In other words, authors found that students in concept mapping group revealed higher cognitive load than those in the control group. This exhibits that the use concept mapping in EFL classes, helps learners to develop a better reading comprehension skill.

This research can have some implications for EFL teachers, institutes, materials developers and syllabus designers. One of the implications of this study is for EFL teachers, and in general, teachers who are working in the teaching of a second language. Teachers can benefit from the findings of this research by seeing that pre-reading activities are very important in the process of reading comprehension. They can understand that if they want to have better readers in the second language, they can use pre-reading activities.

The other implication of the results of this research is for EFL institutes. Those language institutes that want to improve their students' reading comprehension can encourage the use of

these techniques. For this purpose, they can tell their teaching staff to emphasize more on pre-reading activities. They can also give extra time to the teachers for using these activities, in order for them not to be pressed by time and encourage them not to skip this important aspect of the process of reading comprehension.

Materials developers are the other group that can benefit from the findings of this study. Those who are working in the area of developing L2 and EFL materials can include more pre-reading activities in the course books for teachers to use. They can also include these activities in their teachers' guides. Materials developers can also design some extra materials and supplementary books and games for these activities to be used more in the class.

It is suggested that teachers make use of these techniques more often in their classes, especially in the reading comprehension section of their classes. This study suggests that the more teachers focus on pre-reading activities before the actual reading takes place, they will more likely be able to train and educate more proficient learners in terms of reading comprehension. Therefore, pre-reading activities must not be overlooked or ignored in the classroom for better outcomes.

Finally, this study has also some implications for syllabus designers. Syllabus designers can put more emphasis on pre-reading activities in their syllabuses because this research found that they are very helpful and fruitful for better reading comprehension. The extra time they allocate to such activities before the actual reading comprehension phase begins, can revolutionize the proficiency of the learners of the institute in terms of reading comprehension.

Those researchers who are interested in the area of this research can use the design of this study to carry out further research in concern with reading comprehension and the effect of pre-reading activities on improving it. The following directions for future research are suggested:

This study focused on only two pre-reading activities. Those researchers interested in this area can choose other pre-reading activities such as Speed chatting, Discussion, Brainstorming, Pictures, Storytelling, Short conversations, Pictionary, etc. on reading comprehension of the learners. Furthermore, different aspects of reading comprehension can be investigated as the dependent variable of this research. For example, new research can be done on the speed and pace of reading and the possible effects of pre-reading activities on them. Also, using technology-based pre-reading activities can also be studied for future research. For example, all of these pre-reading activities can be used in the classroom using mobile devices and the internet. Also, there are other technology-specific pre-reading activities, such as web quests, that can be investigated.

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