The Impact of Content-based Pre-reading Activities on Iranian High School EFL Learners’ Reading Comprehension

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Abstract—Most specialists in the field of foreign language reading consider reading as an interactive process between the text and the reader’s prior knowledge. Therefore, the activation of prior background knowledge for an effective comprehension is very important. It is generally agreed that the pre-reading phase is the stage where we can help this interaction and activation take place. There are different strategies and techniques which could be applied to make sure of this interaction and to achieve the final goal of reading, i.e. comprehension. In this study, we focus on the pre-reading phase and the impact of three pre-reading techniques (the brainstorming, the kwl (what I know, want to know, learned), and the pre-questioning techniques) on reading comprehension. 125 high school students, both boys and girls, studying pre-university in Tarom, Zanjan, participated in the study. They were assigned to four groups: one control group and three experimental groups for each of the three pre-reading techniques. The results of data analysis indicated that all the experimental groups that used the pre-reading techniques did significantly better in their comprehension than the control group which received no technique. Meanwhile, the KWL group exceeded the other two groups in their performance.

Index Terms—reading comprehension, pre-reading stage, pre-reading techniques (kwl, pre-questioning, and brainstorming), and background knowledge

I. INTRODUCTION

Reading comprehension is of key importance especially to many EFL (English as foreign language) learners who rarely have an opportunity to speak English in their everyday lives (Razi, 2010). Reading is a key skill required to improve and develop students’ understanding of the English language and is a skill that will prove central even to everyday lives. Reading is mostly considered as the most important language skill for EFL learners (Gu, 2003), as it exposes students to the target language and receive valuable linguistic input to build up language proficiency (Erten & Razi, 2003).

The study has important implications for students, teachers, syllabus designers, and material developers. Students can improve their own reading skill through the use of pre-reading techniques. If they learn to use these pre-reading techniques, and relate their prior background knowledge to the incoming information and activate the proper schemata, they could improve their understanding of the reading text successfully. If students lack any previous knowledge, it is the responsibility of the teacher to provide them with some background information to enable them to interpret and make sense of the text. Previewing the main points of the text, and sometimes pre-teaching of the key terms, and asking referential comprehension questions in advance to the task of reading can lead to success in their comprehension for certain. They can help their students by providing opportunities for the students to use these pre-reading techniques in practice in real situations. Material developers and syllabus designers can make use of these findings for providing better conditions for learning and teaching; they can help them read effectively and have meaningful comprehension and enjoy reading as fun.

II. REVIEW OF THE RELATED LITERATURE

A. The Importance of Reading

Reading is the basis of knowledge and cognition which shapes our mentality and gives insights. Davis (2008) believes that having the ability to read in one’s own language is a need for the students of all languages. Reading is a primary life skill. It is a basis for a child’s success in school, and, actually, all over the life. Sookchotirat (2005) believes
that reading is the most important skill in life as it is the basis of all the success in one’s life. Reading is considered to be the most important activity for all students, especially in EFL classes. According to Rivers (1981), reading is a good source of information and an enjoyable activity, as well as a valuable means of extending and consolidating one’s knowledge of the language. Reading abilities are critical for academic learning, and L2 reading is a primary source to learn on one's own beyond the classroom. To Dreyer (1998), in academic contexts, reading is the most important skill for second language learners.

B. Definition of Reading

Traditionally, reading was regarded as a linear process, a decoding one-way flow of ideas and knowledge from a writer to a reader (Gough, 1972), involving the reader in attempting to build up meaning from the written symbols and graphics in the messages in the text with no reference to the role played by the background knowledge of the reader. In the past, reading was considered as a passive skill, i.e., the readers did not have any message production or active mental process like speakers or writers (Chastain, 1988). In modern views of reading, however, there is a shift of emphasis, more in favor of the reader. For Anderson (1999), reading is an interactive process involving the reader and the reading material in building meaning. Meaning does not exist on the printed page; rather an interaction occurs in reading, combining the printed words with the reader’s background knowledge and experience (Anderson, 1999). Reading is a cognitive and interactive task. Goodman (1968) considers reading as a mode of written communication. Accordingly, reading is an activity in which the reader rebuilds the message from the text. To Grabe (1988), reading is a type of communication between the reader and the text. Smith (1988) holds that the interaction between the reader and the text is more significant than identifying and remembering the actual content of the text. To sum up, reading is by no means a linear process; rather, it is a dynamic activity.

Construction of meaning is a key concept and consideration in modern definitions of reading. Day & Bamford (2000) consider reading as the construction of meaning from a written message. In English as a Foreign Language (EFL) context, meaning construction is directed by the teacher. Reading is the construction of meaning through the interaction among the reader's prior knowledge, the information stated or implied in the text, and the context of the reading situation. The reader, in contrast to the traditional views, interprets and makes sense in the printed page through his own mentality and experiences which might be different from those of the writer. This proves that reading is both an active as well as an interpretive process.

C. Reading Comprehension

Comprehension and understanding is the final purpose in the reading process. In a reading situation, priority should be given to meaning and comprehension. Fry (1965) found it difficult to define comprehension. According to Fry (1965), comprehension is the communication process of attaining the thoughts present in the author’s mind into the readers’ mind. As Fry states, comprehension is to get the message and meaning in the text.

Reading comprehension is under the influence of different variables and factors including passage content or topic familiarity, gender, text difficulty, follow-up activities, background knowledge, test types and the like. One of the most important of these factors, i.e., previously acquired knowledge, is the focus of special attention in the following sections.

D. Reading as Process and Reading as Product

The process of reading is 'reading' itself. It is the interaction between a reader and the text; it is reader-centered and attaches greater importance to the kinds of background knowledge and experiences which the reader brings to reading. As Alderson (2000) states, this process may be different for the same reader on the same text at a different time or with a different purpose in mind. The product of reading is the understanding or comprehension of it. This approach is mainly used to investigate the process of reading.

E. Schematic Theory and Background Knowledge

Previous background knowledge of the topic which is stored in reader's mind, and the reader brings with himself to the reading situation, is referred to as 'schema'. Cognitive psychology holds that all of a person’s background knowledge is stored in the cognitive structures of the brain. Therefore, in order to acquire new knowledge, background knowledge or schema needs to be activated. Schema theory is based on the concept that past experiences leads in a mental framework to get new experiences (Nunan, 1999). Based on the schema theory, comprehension of a text is as a result of an interactive process between the reader’s prior knowledge and the text (Carrell & Eisterhold, 1988).

The activation of this background knowledge is through the use of an introductory instructional technique. Ausubel (1960) developed the new introductory linking strategy and named it ‘advance organizers’. Advance organizers help introduce new learning concepts and join or develop new schema to relate the new incoming material to the previously acquired knowledge. They can take many shapes including a simple oral introduction by the teacher, student discussion, outlines, timelines, charts, diagrams, and concept maps.

F. Reading Approaches

1. The Bottom-up Approach
The bottom-up approach was introduced by Gough (1972). The bottom up approach emphasizes that reading moves form part to whole. Processing the meaning starts from the text and it is text-based. According to this approach, the text is of great importance and knowing the meaning of individual words is necessary and promotes vocabulary learning. The reader has to know the meaning of each word to interpret the whole text (Al Hossani, 2005).

2. The Top-down Approach
Goodman (1975) introduced the top-down approach to reading. This approach focused on whole text and the role of schemata or background knowledge to interpret the text. In this model of reading the reader is of great importance his prior knowledge and past experiences are very important.

3. The Interactive Approach
The interactive model was first used by Rumelhart (1990). It is a combination of the two previous models of reading. In this model the reader gets the meaning of the text and also pays attention to the linguistic features of the text.

These text processing models consider comprehension as either text-oriented or as reader-oriented. The bottom-up, or text-driven, model suggests that the meaning of the text resides only in the text itself and is driven through decoding the incoming information in the text. In contrast to this model, the other two models are reader-driven: the reader plays an important role and part in constructing the meaning of the text. He reaches a level of automaticity in recognizing the words and sentences and predicts the meaning of the text after this recognition (Goodman, 1975).

G. Reading Stages
How to enable students to create text-based questions before they are involved in the actual reading? Williams (1987) provides a three-phase (pre-reading, while-reading, and post reading) approach to reading, and pays special attention to the first phase (the pre-reading phase). The technique starts by introducing the topic of the passage which is to be read. After the introduction, students are supposed to work in groups and write a list in two columns. The first column lists things about the topic that they already know, and the second lists things that they are not sure of or don’t know.

H. Pre-reading Techniques
In the past, the general practice of teaching reading, as Chandavimol (1998) stated, the learners were assigned to read a reading task by themselves and do the post-reading exercises. In such reading activity, the teacher did not provide any activities that could stir up the reader to achieve a more effective comprehension. Chatwirote (2003) believes that the teachers could provide reading enhancing activities to interest the learners.

One way of motivating a reader’s interaction with a text for stimulating and building background prior knowledge is out of the use of pre-reading activities (Hudson, 1982). Pre-reading activities are intended to activate appropriate knowledge structures or provide knowledge that the reader lacks. Ajideh (2006) holds that pre-reading activities are beneficial to the reader: by building new schemata, by activating existing schemata, and by informing the teacher what the students know.

Colorado (2007) argues that knowing something about the topic is necessary for students before the reading. Besides semantic and syntactic knowledge, the student should know something about the text in order to understand it better. Pre-reading activities influence reading comprehension because they inform and activate students before reading.

1. The Pre-Questioning Technique
Pre-questions can aid comprehension when these pre-questions focus on the most important aspect of the text (Bean, 1985; Rickard, 1976). Moreover, pre-questions trigger student curiosity about the passage, activate prior content knowledge, make students anticipate, and elaborate what they read (Moore, Readence and Rickelman, 1982).

In this study, two kinds of questions were used: inferential questions and literal (factual) questions. Inferential questions involve information which is not explicitly stated in the text. The reader can find the answer to such questions by using his experience and by inferring. The answer to the literal (factual) questions is explicitly stated in the passage.
These kinds of questions are used to understand, remember, or recall the information explicitly contained in the passage (Longman Dictionary of Language Teaching, & Applied Linguistics, 2002, p. 255).

2. The Brainstorming Technique

Based on Wallace (1992), a very well-known type of pre-reading technique is “brain storming”. A variation of this technique is giving the class a certain key word. Students are then asked to draw forth words and concepts that are related with the keyword or words provided by the teacher. Brainstorming has many advantages as a classroom technique. First, it requires little teacher preparation; second, it allows learners considerable freedom to bring their own prior knowledge and opinions to bear on a particular issue; and third, it can involve the whole class (Ajideh, 2006).

Brainstorming technique is effective in generating new ideas in the students. Richards (1990) observed that student involvement was an important part of developing cognition and generating ideas and brainstorming was an effective way of getting this. He concluded that students who were trained in brainstorming techniques were more efficient at generating and organizing ideas. According to Rao (2007), students who had been trained in brainstorming techniques, produced measurably higher results in writing tasks, and had positive attitudes about the efficiency of the brainstorming techniques as well.

3. The KWL Technique (What I Know, Want to Know, and Learned)

Ogle’s (1986) KWL technique serves to link readers’ previous knowledge to incoming knowledge, while stimulating student involvement in their own learning. The KWL technique is divided into three parts: (1) what students already know, (2) what students want to learn, and (3) what students have learned.

III. METHOD

Participants

From among the total number of 200 pre-university students studying in Tarom region, Zanjan, 125 students who attended high school in Abbar, were selected. The entire number of the students participating in the study was divided into four groups, one control group and three experimental groups intended to test the impact of the three pre-reading activities, namely "the KWL technique, the Brainstorming technique, and the Pre-questioning technique".

1. Instrumentation

1) Pre-test

Since, there was no standard test for our purpose, the researcher had to develop a test. A battery of tests was implemented to collect the required data. The initial test was a general English proficiency test. The pre-test was pilot studied to find any probable shortcomings in it. Pilot study helped improve the test. This pre-test was a multiple-choice reading comprehension test comprising some short readings taken mostly from the previous university entrance exam (konkoor) and from the final exams of high school 3rd grade. Both sources were recognizable enough to credit as they were tests of nation-wide scope. All the readings were followed by 40 multiple-choice questions based on the reading. The pre-test was not timed and the students were given sufficient time to deal with the entire test items and cover them.

2) Post-test

The same test was administered as the post-test after a time interval of four months. There was no considerable test effect as the interval was long enough. Only a small number of the participants remembered to have taken the test before and so they could not logically be influenced by the pre-test. The results of the pre-test were statistically analyzed and led to the inference that the sample enjoys the required level of homogeneity as far as their general English proficiency is concerned.

3) Four Quizzes

After teaching every reading passage, a teacher-made test based on the same reading passage was administered. In designing these tests, the researcher made use of both inside the text materials and outside resources. Meanwhile comments from that colleague and other co-workers were taken into account. All these four quizzes were designed and developed in this way to make sure of an optimal validity.

4) Reading Section of the Final Test

To have further evidence on the practicality and usefulness of independent variables (the pre-reading techniques), we agreed to have a common reading comprehension section for the final test of all groups. The researcher, with the help of the colleague, found a suitable text of an appropriate level and an interesting topic, and included it in the final test. This part was intended to measure the students’ ability and performance on reading comprehension in general. The results were all interesting and contributing to the proposed hypotheses. This section comprised of eight points out of 40 (four out of 20) in general.

IV. RESULTS AND DISCUSSION

A. The Pre-test and the Post-test

As the means of the scores of all groups indicate (question and answer group=9.0, the KWL group= 8.75, the brainstorming=8.26 and the control group=8.43), all groups were at the same level concerning their English background and vocabulary knowledge. These means indicate that the groups' performance was the same in the initial phase prior
to the experiment. In this way, groups' homogeneity was ascertained and allowed for enquiring. In this way we could logically consider the failure or success of the pre-reading activities on reading comprehension.

The results obtained from the post-test, emphasize the significant change taken place as a result of applying pre-reading techniques. They confirm the positive and favorable impact of these techniques on comprehension. As the means in the pre-test and post-test suggest, the control group with no treatment shows no such changes and improvement in performance. Once again, it is to be stated that the first hypothesis is rejected as these techniques do lead to a better and more effective comprehension.

The first research concerns efficiency of the pre-reading techniques. As confirmed by the results of the tests, depicted by the above charts, these strategies are all helpful and all enhance comprehension. Thus, all the three techniques implemented in the study significantly lead to a better comprehension, the degree of change, however, is not equally the same for all techniques.

The other finding concerns the second research question and the second hypothesis. Based on these results, the answer to the second question is presented here. It seems that the KWL technique is more effective as compared to the other two techniques. Taking a glance at the chart, the post-test mean in the KWL group is above the other groups. The results also make clear that the pre-questioning technique is not the most effective technique, rather, based on these findings, the most effective technique is the KWL technique.

The third research question concerns the impact of the involved pre-reading techniques on high-level and low-level students. In the study, it was hypothesized that both low-level and high-level students, equally, can benefit from pre-reading techniques. The results of the study and the findings reveal interesting truths.
In order to define high-level and low-level, the researcher consulted some colleagues in the field of language teaching. Finally an agreement could be achieved. It was assumed that the students who scored 12 or less be considered low-level and those who scored 17 and above comprise high-level students. All colleagues unanimously agreed on this criterion as a key defining term for determining low-level and high-level.

The analysis of the results rejects the hypothesis that high-level students can benefit more from the pre-reading techniques as compared to the low-level students. The analysis of the results reveals more truths on this issue. All low-level students in all the three groups made equal progress in the post-test scores compared to pre-test scores. All the high-level students, too, made similar progress in their post-test scores. This is one interesting and important finding in this study as the researcher could not perceive this before conducting the experiment.

This was a confirmation for the hypothesis. Contrary to the common belief and the supposition of the researcher, both high-level and low-level students could equally benefit from these techniques.

B. Quizzes

After the pre test, four more tests were administered to all groups. These four tests corresponded to the four reading sections in four units in the high school English text book. These four reading passages in their original order of presentation in the book were entitled ‘Child Labor’, ‘Space Exploration’, ‘Information Technology’, and ‘Great Men and Women’.

The analysis of the results revealed several facts; all of the experimental groups outperformed the control group; the control group had a weak performance in these tests as compared to that of the other groups. They had the lowest low-score, high-score, and the mean and there was a significant difference in their performance.

The KWL group had the best results in the test. These findings conform to the previous results; in the similar way, again, we can seek answer to the research questions in the study. All of the intended pre-reading techniques actually led to effective comprehension, but the KWL technique was more efficient in this respect.

C. Reading Part of the Final Test

In addition to the pre-test and the post-test as well as four other quizzes, there was a common reading comprehension part in the final test for all groups. It is worth mentioning that in the final test, since the focus of attention was on comprehension, there was a common reading part in the final test and other parts in the final test were different. This part was intended to assess general comprehension on materials other than those present in the course book.

Based on the analysis of the results, significant differences in the performances of the groups were observed. The mean scores of the reading part in all groups were considerably above that of the control group; the control group had the lowest mean as compared to other three groups. The pre-reading techniques had great impacts on the reading comprehension of students in the experimental groups, but the control group had the weakest performance.

This analysis provides answer to the pre-posed research questions. The results reveal that all pre reading techniques led to more meaningful comprehension. In line with previous findings, again, it was the KWL technique which yielded better results as compared to the other pre-reading techniques.

D. The Questionnaire
In addition to the tests introduced earlier, the researcher made use of a questionnaire in the study to assess the impressions and attitudes of the students concerning the use of pre-reading techniques. The questionnaire contained 17 items with answers ranging from strongly disagree to strongly agree. This questionnaire was intended to measure and evaluate the attitudes of the participants in terms of the efficiency of the techniques in the views of the students.

V. CONCLUSION

A. Findings

This study aimed at evaluating the efficiency of the pre-posed pre-reading techniques (the KWL, the brainstorming, and the pre-questioning techniques) on EFL learners’ reading comprehension. There were three research questions the answers to which formed the basis for the thesis. This study was conducted with 125, both boys and girls, high school students who were divided into three experimental groups, for the three techniques, and a control group.

The mean of the scores obtained from the pre-test assured the researcher of the similarity of background and word knowledge. The mean of scores in the pre-questioning group, KWL group, brainstorming group, and the control group are 9.00, 8.75, 8.26, and 8.43, respectively. These scores indicate that the students were at same level concerning their background English and vocabulary knowledge. All the participants in all groups made progress to a large extent except for those in the control group who received no treatment. A comparison of the mean of the scores obtained from the post-test proves this progress and advancement. The mean scores in the pre-questioning, the KWL, the brainstorming, and the control group in post-test were 13.41, 14.93, 12.43, and 8.43, respectively.

Taking a glance at the scores corroborates the improvement in the scores in a comparison between pre-test and post-test. Comparing the performance of the students in the pre test and the post test reveals great differences. These results are indicative of a great change in the means of the scores of the groups which received treatment. Both the means and the upper scores changed dramatically which is the sign of pre-reading activities’ success in bringing about favorable changes in scores.

Another major finding concerns the pre-posed research question on the efficiency of one of these techniques. Based on these results, it seems that the KWL technique was more effective and leading more to comprehension that the other two techniques. Taking a glance at the post-test mean, the KWL group is above the other groups. The most effective technique, based on these findings, is the KWL technique.

B. Applications and Implications

In some situations, it is felt that reading tasks are dealt with in such a way that they seem unnecessary to attach any importance as compared to grammar or writing. However, teaching reading necessitates its own specialty and it is not an easy job to handle. Familiarity with the phases involved in reading process and activities which are special for each phase and applying them into classroom settings are of key help in the promotion of reading skill in students. When foreign language teachers of reading recognize that each reader brings to the reading situation a unique set of past experiences, emotions and mental capabilities, level of cognitive development, and interest, they realize that not all teaching techniques are appropriate for all students.

In the present study, there were three research questions and hypotheses. Based on the findings in the study, it could be concluded that the pre-posed techniques all lead to a more effective comprehension. That is because familiarity with the topic and content of a text can activate the proper schemata more efficiently as compared to having no idea of what the text is all about. This is due to the fact that providing the reader with some background knowledge of the text can activate his prior knowledge, interest him as well as intrigue his curiosity.

The most successful technique in providing background and activating prior knowledge in the reader, based on this study, is the KWL technique that yields better results than the other two techniques. In addition to this finding, it could be concluded that the techniques can have positive effects on all students whether high-level or low-level, and all learners can benefit from these techniques.

Findings of the current study provide the ground for adopting the claim that providing prior background knowledge of the topic by means of pre-reading activities has key impacts on reading comprehension. Providing and activating background knowledge by means of pre-reading techniques, and previewing content for the students can be effective techniques for the teacher to make up for the difficulties students encounter in reading comprehension. Pre-reading techniques can make a more efficient comprehension and a more successful reading. A wise use of these pre-reading techniques and a combined use of them is one primary step in reading comprehension.

The questionnaire used in the study indicates that a vast majority, nearly all, of the participants enjoyed the pre-reading techniques and improved their reading skill. The questionnaire is of great significance in assessing the views and attitudes of the participants regarding the practicality and ease of use as well as helpfulness of these pre-reading techniques. In most items used in the questionnaire, students had good ideas and agreed on them in general.

As for students, they could improve their own reading skill through the use of pre-reading techniques. If students get familiar with these techniques, they could make more progress and gain an efficient comprehension. If they learn to use these pre-reading techniques, and relate their prior knowledge to the new information and activate the proper schemata, they could improve their understanding of the reading text successfully.

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This study has another important implication: students need to activate background knowledge of the topic and content before they embark on the reading. If they lack any previous knowledge, it is the responsibility of the teacher to provide them with some background information to enable them to interpret and make sense of the text. Previewing the main points of the text, and sometimes pre-teaching of the key terms, and asking referential comprehension questions in advance to the task of reading can bring about success in their comprehension for certain.

The results of the study can potentially change EFL teachers’ attitudes about the nature of reading. Teachers, too, can help their students in achieving the intended change in them. They can introduce suitable pre-reading techniques and encourage the use of them. They can help their students by providing opportunities for the students to use these pre-reading techniques in practice in real situations. The role of EFL teacher is all important in this respect. He can make up for the shortcomings in the course books through his own experience and the provision of effective techniques, especially pre-reading techniques.

Another major implication of this study concerning teachers is that teachers are recommended to use and teach the required comprehension techniques for an effective comprehension in the students. To achieve this goal, two suggestions may be offered to teachers: First, it is better to teach these techniques explicitly. Teachers are also recommended to use and model these and any other newly introduced techniques themselves; in this way students learn them in practice. In this study, we clearly introduced and explained the techniques first, and then modeled them in practice for the students.

Material developers, syllabus designers, parents, and all those in charge and involved in teaching and learning, can make use of these findings for providing better conditions for learning and teaching. Providing students with modern and scientific methods and techniques for learning is undoubtedly a great thing; we can help them to read effectively and have better comprehension and enjoy reading as fun.

C. Suggestions for Further Research

Some suggestions are made for further research based on the results of the present study. It is suggested that further research focuses on the effect of pre-reading techniques on different types of reading, such as short stories and non-educational materials.

In the present study, some variables such as gender and age were not taken into account. Further studies can focus on the role of gender and age range in comprehension. Future research, also can focus on other aspects of language and explore the efficiency of such techniques on other language skills, i.e., listening, speaking, and writing.

REFERENCES

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