

## **Incorporating Schema in the Improvement of Iranian EFL Learners' L2 Speaking Ability**

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### **Abstract**

The goal of this study was to investigate the impact of incorporating background knowledge on L2 vocabulary development of teenage EFL learners in a language institute in Minab, Iran. To this purpose and as an experimental method of research, two intact groups of learners were chosen to participate in the experiment. The participants of the study were made up of 56 EFL learners in the language institute. To homogenize the subjects, an Oxford Placement Test was administered and only those whose scores fell one standard deviation above and below the mean were selected for the study. The other instruments were two sets of vocabulary tests which were used to tap the initial vocabulary knowledge of the learners in both groups: pre and post vocabulary tests. The same type of material was used for both the experimental group (EG) and the control group (CG). In other words, the learners in both groups were instructed through the same sources, the same teacher, and the same teaching hours. Based on the obtained data, the participants in the CG did not benefit from the traditional teaching processes as much as the learners in EG.

**Keywords:** schema, speaking improvement, vocabulary, EFL learners

### **INTRODUCTION**

The goal of the study was to investigate the effect of providing background knowledge to improve the speaking skill of the EFL learners at a language institute in Minab. This chapter provides the required literature on the topics about the subjects under investigation and the studies on similar topics and ideas. To achieve the ability to communicate orally has been one of the extreme goals of most language classes in Iran. Ur (1996) believes that people who know a language are referred to as speakers of that language. The learners who attend a language class long deeply to speak it as fluently and as efficiently as possible. In fact knowing a language in Iran and among language speakers is closely associated with the ability to speak it and master the oral skills although the communicative role of English in Iran is neglected and is viewed as a tool of reading.

One approach to develop speaking is called to be schema theory. This theory was first proposed by Kant, a famous German classical philosopher in the 18th century, to explain the ways human beings applied to get to know objects of different traits and different classification. Rumelhart (1980) reckoned that schemas were a group of interactive structures of knowledge or “building blocks” that constituted a person’s cognitive ability. The obstacles which the learners have to overcome in order to improve in this area of language are numerous. All learners have their own desires, shortcomings, limitations and abilities, any of which may differ from those of others and this is why to handle all these factors in a given situation does not seem to be easily possible. When language learners are viewed as human beings, teachers have to pay attention to the emotional and psychological needs of these learners. Some of the most important factors to consider are the teaching and learning strategies and techniques employed by the language teacher.

Language classes waste the learners’ efforts by insisting on traditional teaching methods. In other words, too much attention is given to the language form and grammar rules, but little attempt is undertaken to consider the psychological needs of the learners (Rumelhart, 1980). Besides, the pre-existing knowledge and the background study of the learners are ignored and neglected. Teachers have very little idea about the experience of the learners and their error correction strategies and the impact they may have on the participation level of the learners and the stress and anxiety that they may produce (Ur, 1996).

The other problem of the language classes is when too much attention is given to the role of the teacher and the role of the learners is neglected. It all may demotivate the learners and lead to indifferent learners who have no objective in the language class to follow. The study is useful and important to carry out since it will have to improvise the teaching techniques that will implement the potential power and ability of the EFL learners of the study. Nassaji (2002) pointed out the importance of schema by discussing that the theory provided new and exciting developments in the field of cognitive psychology. The theory was used to explain and interpret a host of cognitive processes such as differencing, remembering, reasoning, and problem solving and was served as an impetus for a large volume of experimental research in learning, comprehension, and memory. The importance of the study lies in the idea that implementing and activating the EFL learners’ background knowledge can assist the learners to speak in the language class more fluently and skillfully by resort to their pre-existing knowledge and schema. The study follows certain objectives to catch. First, it tries to prove the effect of the background knowledge on facilitating the acquisition of oral language. It tries to assist the learners to speak more fluently and easily and communicate in different situations and contexts on various topics. Using the background knowledge can help the learners understand the context more quickly. The theoretical framework of the study is based on the following approach. It is on the schema theory where Richard and Schmidt (2002) discuss that it is the theory that in comprehending language people activate relevant schemata allowing them to process and interpret new experiences quickly and efficiently. Schemata serve as a reference

store from which a person can retrieve relevant existing knowledge and into which new information is assimilated. When encountering a topic in reading or listening, the reader activates the schema for that topic and makes use of it to anticipate, infer, and make different kinds of judgments and decisions about it. Schema theory plays an important role in theories of second language reading and listening comprehension. They go on by saying that a difference is sometimes made between content schemata and formal schemata. Rumelhart (1977, 1980), Rumelhart and Ortony (1977), and others developed the theory of schemata that emphasizes heavily the fundamental role that a reader's background knowledge (usually interpreted as knowledge of content and rhetorical structure) plays in how well that reader understands a text. In one aspect of this work, Rumelhart and others attempted to develop story grammars that were based on schema theory and were designed to represent the generic knowledge of a story's prototypical content and structure. This was done to show that readers draw on such generic knowledge representations to comprehend what they read.

## **LITERATURE REVIEW**

### **Schema Theory Development**

The word Schema was a technical term in cognitive psychology, which was firstly put forward by Kant (1781). He thought that it would make sense only if the concept was connected with a person's background knowledge. Then Bartlett (1932) defined schema as the reflection or active organization of people's past experience. Schema theory appeared in the middle of 1970s, with its main representatives. They put forward the idea that Schemata are higher-level, complicated and accumulated knowledge structures. Modern schema theory considers that a schema can mean: (1) a mental picture of some area of experience; (2) a collection of organized and interrelated ideas, concepts and prior knowledge structures that are abstract representations of objects, events and relationship in the real world. According to Anderson and Pearson (2001), schemata are active, self-activating, and self-revising. Schemata play a critical role in cognitive processing. Schemata help us to focus our attention, to comprehend, to interpret, to remember, to make inferences, to set goals and expectations, to reason, and to solve problems. Schema theory is based on the notion that past experiences lead to the creation of mental frameworks that help us make sense of new experiences. It has been used as a theoretical model in several important areas of listening and reading research. Each individual's schema is unique and depended on that individual's experiences and cognitive process.

Knowledge in Schema Theory, however, is not necessarily stored hierarchically. In fact, it is meaning-driven and probably represented propositionally, and these networks of propositions are actively constructed by the learner. Schemata are important not just in interpreting information, but also in decoding how that information is presented. Readers use their schematic representations of text (narrative, compare/contrast, cause/effect, etc.) to help them interpret the information in the text. Schema reflecting how information is presented can also be culturally (Kant, 1781). Linguistic schemata refer to the extent to which the reader can master the language of the reading material.

As we know, that vocabulary is the foundation of expressing and building up all kinds of schemata. However, the English vocabulary is so large that it is impossible and unnecessary for students to master all of it. Therefore, teachers should help students activate their linguistic schemata so that they can guess the meanings of new words during reading comprehension.

### **Instructional Implications of Schema Theory**

The most important implication of schema theory is the role of prior knowledge in processing (Anderson and Pearson, 2001). In order for learners to be able to effectively process information, their existing schemas related to the new content need to be activated. Correspondingly, teachers of reading have found that activating a learner's schema enables them to better process information that they are reading. Therefore, many advocate teaching learners metacognitive strategies designed to activate one's schema before reading, such as reading heading and the title, looking at visuals in the text, and making predictions based on the title and pictures (Anderson and Pearson, 2001). Educators must pay attention to the cultural references in the material we present to our students and avoid potential cultural-biases. Students who have not grown-up in American culture may be at a disadvantage when asked to read and answer questions about George Washington on a standardized assessment test because, unlike American students, they have no preexisting George Washington schema that they can activate that will help them process the information they are reading more effectively. Au (1979) documents its effectiveness with children in Hawaii. This method, which uses discussion to link what the reader already knows to what will be countered in the text, has essentially three simple steps: experience, text, and relationship. In the *experience* step, the teacher leads the students in discussion of their own knowledge or experiences that are related in some way to the passage to be read. To support the role of Background knowledge in an effective comprehension, Patricia et al (1989) continue by saying that this is important not only because the students activate any relevant prior background they may have and begin to relate it to the text to be read, but also because the experience step provides motivation for reading the text.

### **The Difficulty of Acquiring Oral Skills**

One main difficulty in the area is the integration of speaking and listening as two intervening and inseparable skills. Johnson (2001) and Shumin (2002) identified four areas of knowledge required in learning a foreign language to speak: grammatical, sociolinguistic, discourse, and strategic. Grammatical competence comprises different areas of pronunciation, morphemes, syntax, and vocabulary. Each subcategory has its own limitations and difficulties of acquisition. It enables speakers to use and understand English-language structure accurately (Brown, 1994; Stern, 1991). Brown (2001) has enumerated the following characteristics as what makes spoken language easy as well as difficult:

Clustering: Fluent speech is phrase by phrase and not word by word.

Redundancy: The speaker has an opportunity to make meaning clearer through the redundancy of language.

3. Reduced forms: Contractions, elisions, reduced vowels, etc. all form special problems in teaching spoken English.

4. Performance variables: One of the most important differences between native and non-native speakers lies in the techniques which they use to fill the gaps in their speech using hesitations, pauses, backtracking and corrections.

5. Colloquial language: Learners in their tasks have to be familiar with the words, idioms, and phrases of colloquial language.

6. Rate of delivery: One important task of the teacher in teaching spoken English is to help learners achieve an acceptable speed along with other attributes of fluency.

The approach having been improved and implemented by Green et al (2002) is termed to be 'Developing Learner Autonomy'. The approach bases the class activities on the learners' needs, capacities, desires etc. They discuss that their approach is supporting the idea that the learners in their course of language acquisition have to become self-directed and independent. They add that all this will bring about a sort of metacognitive awareness of the learning processes.

Kumaravadielu (1993) discussed how we can make our classes communicative and promote the communicative aspect of language as far as possible. He says that in theory, a communicative classroom seeks to promote interpretation, expression, and negotiation of meaning. To achieve these goals, Kumaravadielu (1993) proposed a framework of five macrostrategies as a possible tool to make the communicative classroom genuinely communicative. The strategies are based on self-evident hypothesis: L2 learning/teaching needs, wants, and situations are unpredictably numerous. We can only help teachers to develop a capacity to generate varied and situation-specific ideas within a framework that makes theoretical and pedagogic sense. There are five macrostrategies as listed below:

1. create learning opportunity in class
2. utilize learning opportunities created by learners
3. facilitate negotiated interaction between participants
4. activate the intuitive heuristics of the learners
5. contextualize linguistic input

In the same manner, Tudor (1993) discussed what the nature of a learner-centered classroom has to be and what qualities make it different from other teaching strategies. To Tudor, in a learner-centered approach, the students are seen as being able to assume a more active and participatory role than is usual in traditional approaches. This refers to a way of organizing classroom activities in which the learning strategies are determined by the students and they decide on such things as conceptual and linguistic

content of their activities. All these normally and naturally enhance the students' motivation and involvement.

## **METHOD**

Since it was an experimental method of research, two groups of learners in a language institute were chosen to participate in the experiment. The researcher controlled all of the necessary criteria for such an experimental research. Thus, the researcher incorporated the qualities of a true experimental study in terms of the type of the participants, the instruments that were used to tap the speaking level of the learners, the design and finally data collection and data analysis of the study.

### **Participants**

The population of the study was made up of 48 pre-intermediate EFL learners in a language institute in Minab. As the first step, the population had to be homogenized. To homogenize the study subjects to select an appropriate sample, an Oxford Placement Test was administered and only those subjects whose score fell one standard deviation above and below the mean were selected for the study. As a result 12 subjects were excluded. The other 36 subjects were randomly classified into two groups; each group included 18 female students, aged 15 to 18. They constituted the experimental and control group for the study.

The reason for selecting these learners is based on the idea that they had already received the required instruction to learn speaking as one essential and necessary skill in their language courses. Learning how to converse is an essential part of their educational need and they had to do their best to speak with others in the language class. Primarily and as the first step to measure the knowledge of the learners, an Oxford Placement Test was administered to homogenize the study subjects. This test contains 100 items on grammar, vocabulary, and reading comprehension in the form of multiple choice tests and limited completion tests. To identify the initial speaking ability of the participants in the study, a pre speaking test was taken. To undertake this step, the same procedure as PET Examinations were used. In this study the scorer separates the oral production components by classifying them into the areas of grammar and structure. Holistic scoring calls for the reader to rate overall proficiency on a single rating scale, but analytic scoring focuses on certain items. Although the method suffers from some pitfalls, if applied correctly and cautiously, it can prove valid and reliable indication of the scoring procedure.

Therefore, to score the speaking ability of the subjects both for the pre and posttest, three experienced scorers were used to put their judgments on the oral production of the subjects using analytic method. The mean score of the given marks by the three scorers establishes the final mark.

## Materials

The teaching system of the language institute in Talash Institute in Minab uses Touch Stone Book series in the language courses. It is a four volume series of books that begins with beginner and continues to book 4 for intermediate learners. For the present study, book 3 was chosen that was designed for pre-intermediate language learners. Each section of the book contains topics on listening, reading, writing, vocabulary, and finally free talk. The focus of the study was on reading and vocabulary. In the first part the back-ground knowledge related to the reading activity was activated and in the next steps they were practiced by the teacher and learners.

## Design of the study

The study, being an experimental and cross-sectional study, started with two pre-intermediate EFL learners in a language institute in Minab. Richards and Schmidt (2002) discuss that experimental method is an approach to educational research in which an idea or hypothesis is tested or verified by setting up situations in which the relationship between different participants or variables can be determined.

The dependent variable of the study was developing the depth of the EFL learners' speaking skill, and the dependent variable was activating the EFL learners' background knowledge when exposed to speaking. As the nature of experimental studies indicates, two groups of subjects, the pre and posttests as well as the treatment were the most important qualities for the present study. A pre-test including the tests of vocabulary was taken at the beginning of the course to determine the initial level of the learners. Subsequently, for the EG, learning began by activating the background knowledge of the EFL learners of the study.

## Data collection

The result of the study was based on two types of sources: the placement test and the pre and post test scores provided by different scorers. The scores of the placement test were used to get the participants to be homogenized and the speaking test was provided by three scorers to be objective.

## Data Analysis

The researcher applied t- test as a parameter to discover any difference between the performances of the two groups from pre to posttest so as to make clear if any of the groups had outperformed the other. The other parameter, reliability of the test, was also estimated. Besides, the Spearman Correlation was implemented to discover any meaningful relationship between the two pre and posttest of each group. The researcher moreover used T- test to analyze the difference between the means of the two groups regarding their scores on speaking and oral proficiency skill.

## RESULTS

Table 1 presents the basic information about the means and standard deviation of the three raters on the pretest for the CG. As it can be seen, the mean score given by the first rater is 12.52 and the mean given by the next rater to the same group is 12.29, and finally the mean given by the third rate is 12.41, and the last row shows the total mean score of the three raters which is 13.40. The total mean shows the mean of the control group on the pretest.

**Table 1.** Pretest data for control group

	N	Mean	Std. Deviation
Pretest for control group: scorer 1	18	12.5294	2.03463
Pretest for control group: scorer 2	18	12.2941	2.28486
Pretest for control group: scorer 3	18	12.4118	2.00184
Total mean		12.40	

Besides, table 2 presents the statistical information about the means and standard deviation of the three raters on the pretest for the EG. As it can be seen, the mean score given by the first rate is 12.86 and the mean given by the next rater to the same group is 13.90, and finally the mean given by the third rate is 14.02. The last row shows the total mean score of the three raters which is 13.59. The total mean shows the mean of the experimental group on the pretest.

**Table 2.** Pretest data for experimental group

	N	Mean	Std. Deviation
Pretest for experimental group: scorer 1	18	12.8611	1.32627
Pretest for experimental group: scorer 2	18	13.9028	1.38037
Pretest for experimental group: scorer 3	18	14.0278	1.57622
Total mean		13.59	

As the data in the above sections revealed, the correlational relationship between the scorers led to some sort of indications: first the scoring procedures employed by the three scorers are valid enough for the pretests and not so reliable for the posttest; second, the low standard deviations is an indication of relative homogeneity of the given marks by the raters. Third, the difference between the scores of the subjects from pre to posttest can show the progress of EG over CG. All in all, it can show the effect of the treatment.

## DISCUSSION

Based on the achieved results from the study data presented in the previous section, the hypothesis above is verified. In other words, background knowledge activation has profound impact on the speaking skill and performance of the subjects of the study. It moreover can show the effect of the treatment which was activating the background knowledge of the subjects on the given topics. As it can be seen in chapter 4, the mean score given for CG by the first rater is 12.52 and 12.29 by the next rater and 12.41. The total mean score for CG is 13.40 for the pretest. On the other hand, the mean score for



pretest of EG is calculated to be 12.86 and this is 13.90 and 14.02 by the third. The total mean score for pretest of EG is 13.59 which is almost similar to that of the pretest CG. In other words, not much difference could be observed between the mean scores of pretest for both CG and EG.

On the other hand, the total mean score for post CG is calculated to be 14.71, which is relatively higher than the pretest, but the total mean score for posttest EG is estimated to be 16.22 which is almost different and much higher than the pretest which was 14.2. This is an evidence of relative progress in the speaking skill of the subjects in the EG which were exposed to peer error correction strategy. The higher means of the EG can indicate the idea that they had improved in their speaking ability.

The second hypothesis is also confirmed since the increase in the total scores of the learners in EG from pre to post test can reveal relative progress of the learners. However, the improvement in this area is achieved as the learners had the chance and opportunity to participate more actively in the learning situations provided by the teacher. This is why, the second hypothesis is proved to be correct and can be verified. In other words, more participation will normally lead to more progress in the given area.

## CONCLUSION

Data from this study show that the difference in growth in speaking was statistically significant, because the EG showed a significantly higher amount of growth in their scores compared to CG. Working together with resort to the learners' life experience and the knowledge they had with them can really facilitate the teaching process, involve the learners in the teaching processes and lead to deeper understanding and learning speaking. The results are true for the participants of this research but it can be applicable to similar learners in similar contexts, where teachers and learners follow almost the type of objectives. It's recommended that EFL instructors and teachers in different levels and contexts resort to the knowledge and experience that EFL learners have with them. It is a useful device that can enhance the new knowledge and facilities its acquisition and retention. Based on the achieved results, it was proved that using background knowledge can certainly facilitate the process of speaking acquisition and improvement. Above all, regarding the goal of the study, enough emphasis was given to the role of the learners by exposing them to their background knowledge. The result showed improvement in speaking of the learners in the EG more than that of the CG.

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