# A Reading-Based Approach toward Teaching English at the Elementary School

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### ABSTRACT

The main objective in this study was to see if **starting foreign language instruction from the elementary school was justifiable. To this end, a reading-based language teaching method was devised and then used in a primary school for a period of seven months. 170 primary school students (male and female) in five classes of grade 3 and 4 were taught English through this teaching program. Results of the final evaluations indicated that all classes gained mean scores higher than the norm established by the study. In relation to different selected reading sub-skills, boys showed significantly higher performance in word meaning recognition and sentence and text comprehension. However, in making correct sound-symbol relationships, both sex groups had similar performance. On the basis of the findings, this study suggests reading-based English teaching at elementary schools to be started from grade 3 as one of the alternative teaching programs that the Education Organization can consider and put into practice.**

**Keywords:** 1. Reading 2. Phonics 3. Look-Say 4. Interactive Model 5. Elementary Education 6. Teaching Reading.

## 1. INTRODUCTION

Current trends in foreign language teaching methodology mostly tend to expose learners to an extensive introductory stage through which they are supposed to develop understanding of the spoken form of the language they learn. At this stage, learners demonstrate their understanding of the

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foreign/second language by providing correct responses to their teacher's inquiries. The responses may range from verbal to physical; that is, learners may provide answers in their native language or perform actions in response to the teacher's commands.

The theoretical issues introduced by the Comprehension Approach (Chastain, 1988) and practical realization of those issues in the Natural Approach and the Total Physical Response Method (Richards and Rodgers, 2001) are prime examples of such trends.

According to Richards and Rodgers (2001), the Natural Approach emphasizes exposure or input in order to make learners pay attention to and understand what they hear; that is, verbal production practice is not required at early stages. Similarly, it is maintained that the primary role of learners in a TPR class is that of a listener and performer. Learners are required to listen carefully and attentively first and then respond physically to commands issued by the teacher.

This emphasis on oral stimuli, especially at the early stages of learning a second language stems, in fact, from the premise that speech is the primary means of communication in natural languages and that learners primarily have to learn how to understand and respond to this form of language. Such a pedagogical conclusion is also based on the fact that children acquiring their mother tongue go through oral comprehension and oral communication long before they are exposed to the written language. That is why even before producing speech, children develop a noticeable receptive command of the language their parents use in daily life. The development of such competence takes place while the child is continuously addressed and directed by parents in different occasions.

The central issue in the above contention in favor of extensive work on comprehension and developing receptive and oral skills at early stages of foreign and second language learning is the tendency to consider successful second language learning a process parallel to child first language acquisition. However, Brown (2000) maintains that adults learning a second language are quite different from children acquiring their mother tongue regarding linguistic, cognitive, affective, neurological, and psycho-motor considerations.

Brown's contention in relation to delicate differences between children acquiring their native language and adults learning foreign or second languages provides support for the pedagogical implication that practitioners and teachers do not necessarily have to make learners go through the same stages as those experienced by children acquiring their

mother tongue. Instead, they can encourage learners to make use of whatever means at their disposal in order to accelerate the process of second language learning.

Meanwhile, an experiment carried out by Dlugosz (2000) shows that young learners of English as a foreign language benefit more from their experience in learning a second language if reading instruction is also included in the teaching programs even at early stages. Through her research project, she showed that an emphasis on developing reading ability at the beginning of the English language instruction would help young learners not only in the very process of learning how to read, but also in gaining considerable achievement with respect to understanding the spoken language as well as developing speaking ability.

Experimentations such as this call for a reconsideration of the role of reading in teaching a foreign language especially to young learners. As nicely indicated by Carroll and Chall (1975), if you teach someone to read, you have given him a new world, in fact, a new life to grow in. A logical implication could be that reading is at least a way to raise independent learners and that through reading independent access to knowledge is possible.

As regards public education, when children start school, they have already developed an aural/oral linguistic system of their native language and they strengthen it through literacy development with extensive reading and writing practice at school. When established, this literacy can function as a basis for literacy practice in a foreign language, according to Linguistic Interdependence Hypothesis (Cummins, 1979, 1991, cited in Bernhardt and Kamil, 1995). This hypothesis simply states that the ability to read in a second language has considerable commonalities with that of a first language. A reading-based foreign language program is then supposed to reinforce the development of a new linguistic system that can be taken as a proper threshold to work on oral skills on the basis of the knowledge gained through meaningful reading. The possibility of providing continuous exposure to the foreign language through various reading texts and controlled practice based on that exposure adds to the importance of providing such a threshold.

The point is exactly related to the problem to be stated in relation to English instruction as a part of public education in Iran. Teaching English at three different levels covers almost seven years. Regarding this extended curriculum in English instruction, one expects Iranian students, at least at the end of the pre-university program to be able to use sources of

information and amusement in English such as the internet, newspapers, magazines, and story books, corresponding to the level of their language and world knowledge. This expectation is, however, far away from reality.

University students in various fields of study are also supposed not to have much difficulty with written materials in English presented as sources of information. However, the reality is that if individual students do not have the opportunity to participate in language classes at different private or non-private language institutes before entering university, they surely face considerable difficulties with reading English texts while such reading is continuously required in major courses mostly offered with materials in English. Furthermore, remedial and pre-requisite courses in English for a large number of university students at different levels of education are mostly based on developing reading comprehension.

## 1.1. Objectives of the Study

The present study was designed to examine the application of a language teaching strategy primarily aiming at developing reading sub-skills to be used as a basis in teaching English as a foreign language to students at primary schools. The teaching strategy is based on a simple variation of the theoretical, interactive model of the reading process proposed by Rumelhart (1997) to be elaborated below. It is, in fact, a synthesis of Phonics and Look-Say methods of teaching reading to children, each rooted in quite different theoretical views of the reading process (Dlugosz, 2000). These viewpoints will be elaborated on in the following section.

Of central interest in this study was to find out whether English instruction with a reading orientation can help primary school students develop the expected reading sub-skills. Gaining at least 75% of the total possible scores on the corresponding tests was set as the criterion for success in this regard. Another issue in relation to the application of this program was the question of what grade to start with. Sex difference regarding achievement through this reading-based language learning was of concern, too. Thus, the research questions can be stated in the following way:

a. Does English instruction with a reading orientation at primary schools help students develop basic reading sub-skills in order to attain the norm set by the study on the corresponding tests?

b. Do 3$^{rd}$-graders and 4$^{th}$-graders, who receive the same treatment, perform differently on the tests relevant to the different phases of the treatment?

c. Do male and female students, who receive the same treatment,

perform differently on the tests relevant to the different phases of the treatment?

## 2. LITERATURE REVIEW
### 2.1. Related Literature
Teaching beginning reading and the comparison of different methods and approaches to early reading instruction have long been hot and popular issues for debate among reading specialists, practitioners, and even concerned parents in English-speaking countries. To determine the efficiency of different methods, a large number of comparative studies have been reported. In an extensive study, Bond and Dyskstra (1997) classified and reviewed numerous research projects done on a number of major methods used in first-grade reading instruction. Most of the studies reviewed involve those comparing basal reading programs and other approaches to teaching children to read including "the initial teaching alphabet" (p. 351), "phonic methods" (p. 352), "linguistic methods" (p. 354), 'individualized methods" (p. 355), and "language experience methods" (p. 356). The basal reading programs have been the cornerstone of the elementary reading instruction in the United States for a long time. Teaching and learning in the basal reading programs are primarily based on an approach to early reading instruction known as Look-Say method. According to Dlugosz (2000), the predominant methods of teaching beginning reading in the above-mentioned context are Phonics and Look-Say. Zakaluk (1996) states that these methods can respectively be related to top-down and bottom-up, two well-known theoretical approaches in interpreting the reading process.

Through Phonics, also known as the code-emphasis method, children are taught the sounds for individual letter symbols and their combinations first. Then, they learn how to blend the sounds they have worked on from left to right in order to make words and to sound them out in turn (Chew, 1997). The result of such an approach in actual reading would be that the child decodes written words by analyzing them and assigning relevant sounds to letter symbols. This method of teaching is supposed to enable the child to decipher unfamiliar words through developing these word-attack skills. Since most English words are phonetic, such skills are supposed to help the child with reading words, sentences, and simple texts. Exceptions to phonetic rules can be dealt with in later stages.

Look-Say, or meaning-emphasis method, on the other hand, is based on an extensive process of concentrating on word meaning and memorizing the

overall shapes of words as combinations of letters and without focusing on individual letter sounds (Dlugosz, 2000). Teachers should support this process by introducing words orally and showing flash cards repetitively representing objects accompanied by the relevant words.

There is a great bulk of research projects on the merits and demerits of both methods. However, the results were in a clear conflict in a way that either side could support its claim to superiority by pointing to numerous studies. Since there was a great need to examine and weigh the large amount of conflicting data, Chall (1983) reviewed and evaluated hundreds of research studies in addition to interviewing teachers and textbook publishers and observing teaching and learning procedures in classrooms. She convincingly concluded that children who are taught with phonics enjoy a clear advantage over those who have not gone through this learning process. The point is that those who have been taught how to read only with Look-Say method show better performance only in the early years but they lag behind at later stages since they have not developed the word-attack skills necessary to becoming independent readers.

It is also of interest to find out whether the type of teaching method used at primary schools has an effect on literacy development at high schools and university levels. Chall (1983) made use of correlational analyses in her comprehensive and longitudinal study and came to the conclusion that at all levels from the first grade of primary school to college education; students who have good knowledge of phonics tend to be good readers while those lacking this knowledge turn out to be poor readers.

In their lengthy comparative review of the relevant studies, Bond and Dykstra (1997) conclude that phonics should be considered as an indispensable part of any reading program, although it does not contribute much to children's comprehension of what they read; it mainly contributes to the process of reading in relation to word recognition.

Research projects on sex differences in early reading instruction clearly show that girls are superior to boys regarding reading achievement (Bond and Dykstra, 1997). Environmental conditions in schools as small social units and in the society as a whole are shown to be the causes for such differences.

All the research projects mentioned above have compared methods of teaching reading to children whose native language was English. These children get involved in learning to read and starting to develop literacy at primary schools with a considerable repertoire of word meanings in mind, which is previously developed in their pre-school experience with their

native language at home. Such considerable language knowledge of word meaning paves the way for a single method like Phonics to go ahead successfully by merely focusing on the building blocks, which make words, that is, letters with various corresponding sounds and the combinations of letters.

The case is, however, totally different with young learners who are to learn how to read in English as a foreign language. There is not such valuable language knowledge to back up mere focusing on letters, their combinations, and the sounds they make. That might have been the reason why Dlugosz (2000) made use of the Look-Say method in her study with Polish children and gained supporting results to show the effective role of reading in the process of learning English as a foreign language at an elementary level.

The participants in this study were Iranian primary school students who started learning how to read in English while they had no knowledge of either meaning or form of English words. Therefore, a convenient teaching program in the case of such learners had to be based on a theoretical framework that would emphasize both working on form or sound-symbol relationships on the one hand, and developing semantic and lexical knowledge on the other.
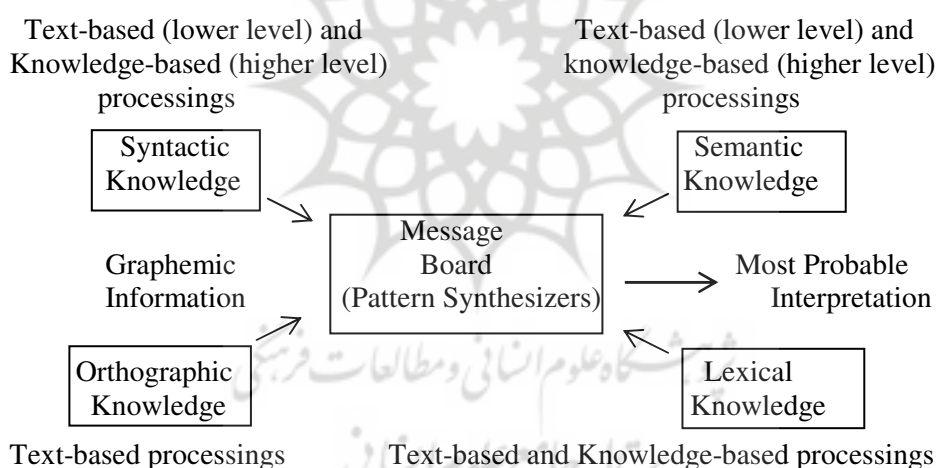
## 2.2. Theoretical Framework

The best method of teaching reading to children, as mentioned above, has been the topic of continuous controversy among reading specialists and educators. The question of focusing either on individual letters and their relevant sounds or the whole shape of the word and how it is sounded out altogether in the process of word recognition is the central theme of such controversy.

Theoretically, this controversy stems from different views of reading proposed by two approaches. According to the bottom-up view of reading, readers should merely decode the language presented to them on paper. That is, the process of reading begins with recognizing letter names and associating individual letters or clusters of letters with their relevant sounds. In the next step, readers blend the sounds or sound clusters into words. The process of blending, this time, goes ahead with words or meaning units to make sentence meaning (Gough, 1972).

The top-down view maintains that readers primarily get involved in the process of constructing their own sense of the text (Goodman, 1970; Stanovich, 1980). According to specialists in this camp, readers have a prior sense of what can be meaningful in the written text on the basis of their life

experiences and their knowledge of language; they are skillful in selecting the fewest most productive cues necessary for drawing meaning. Therefore, readers are not limited only to one source of information, that is, the letters they see. Rather, they make use of semantic and syntactic cues. These sources of information help readers in guessing what the general message would be beforehand.

The point is that neither approach can exclusively account for all that happens in the reading process. That is why Rumelhart (1977) proposed an interactive model in which both letter features or text-driven information and the reader's background information contribute to the process of meaning interpretation. In this model, according to Zakaluk (1996), patterns of information are synthesized and all the previously identified sources of knowledge are integrated in order to get to the most plausible interpretation of the text. A simple schematic representation of the model adapted by Zakaluk is given below.



Text-based (lower level) and Knowledge-based (higher level) processings

Text-based (lower level) and knowledge-based (higher level) processings

Syntactic Knowledge

Semantic Knowledge

Graphemic Information

Message Board (Pattern Synthesizers)

Most Probable Interpretation

Orthographic Knowledge

Lexical Knowledge

Text-based processings     Text-based and Knowledge-based processings

**Orthographic knowledge** deals with the important fact that language is structured and that letter symbols are arranged according to a fixed set of rules and that these letters cannot be put together arbitrarily.

**Lexical knowledge**, on the one hand, contributes to word identification based on orthographic information; and on the other, helps readers understand word meanings and comprehend in general.

**Syntactic knowledge** also functions as an additional source to support word identification, this time with respect to word functions in structural patterns. Consequently, this type of knowledge contributes to text

comprehension.

**Semantic knowledge** is rooted, in fact, in the background knowledge of the reader. Again, it contributes to word identification and text comprehension in general.

This model was adopted as the theoretical framework for the study due to the theoretical contention elaborated above in favor of the model and also due to the objectives of the study and the characteristics of the population of interest to be given below.

### 3. METHOD

### 3.1. Population

The population of interest in this study comprised students studying in primary schools in the educational district 1 in Shiraz. The Education Organization in Shiraz has divided the city into four educational districts. From among those subdivisions, district 1 is the largest. According to the official statistics issued by the organization in district 1 and with respect to the area covered and the student population, it is one of the largest educational districts in the country. The distance between the schools located farthest from each other is 100 kilometers and students studying in this district make up 10% of the total number of students in the province at different levels. Another reason for choosing this population is in relation to an extraneous factor to be explained in the next section.

### 3.2. Participants

One hundred and seventy primary school boys and girls in five classes participated in this study. The students in this sample had no prior experience in English learning.

Apart from the independent variables of educational level and sex mentioned in the research questions above, a variable that could bring about changes in the dependent variable, reading achievement, was the difference in socio-economic conditions of the families from which the students came. In fact, socio-economic differences have the potentiality of affecting students' performance on different school subjects. Homogeneous selection was, therefore, needed to make sure that the groups were "reasonably comparable" on the "extraneous variable" (Ary et al, 1972: 319). Regarding the extensive spread of District 1 in comparison to others and accordingly the higher probability of finding schools with students coming from families of similar socio-economic conditions, it was decided to conduct the quasi-experimental research with a sample of students in this district. Therefore,

consultations were made with some officials in charge of the primary education to find out about the possibility of selecting students with similar socio-economic backgrounds.

Considering the variable in question, the officials introduced a number of primary schools. These schools, according to them, only register children whose parents are employed in the Education Organization. They confirmed that almost all of the students in these schools come from families with similar conditions regarding social and economic considerations.

One of the suggested schools welcomed the proposal and expressed willingness to cooperate with the researchers and to include the suggested teaching program in its regular schedule. Extensive consultations with experienced teachers in this school made it clear that students in grades 1 and 2 were deeply involved in developing early reading comprehension skills at sentential and suprasentential levels in their first language and that they would not be able to receive instruction on reading comprehension in a foreign language. Therefore, from the classes in grades three and four in the boys' section, one class from each level and in the girls' section, two grade-3 classes and one grade-4 class were included in the study. With collaborations on the part of the principals in both sections and under the permission of the Education Organization (gained with so much difficulty), the English teaching program was included in the overall teaching schedule of these classes for the school year.

### 3.3. Materials

As stated above, the main objective of the study was to examine the implementation of a reading-based English teaching program on the basis of a simple variation of an interactive model of reading and at an elementary level. Accordingly, the teaching materials were prepared with respect to this model and geared to such a level. That is, teaching units were organized in a way that they included elements from both Phonics and Look-Say.

Due to numerous advantages attributed to Phonics as indicated above, the cornerstone in each unit of the first textbook prepared for this purpose was the systematic presentation of a vowel accompanied by two or more consonants within a key word per unit. The key words were those standing for familiar objects, animals, jobs, or places. This phonic part of the materials was supplemented with a semi-Look-Say part in which a limited number of concrete words sharing the vowel in focus were presented merely through showing flash cards and drawings. Students had small-size versions of relevant pictures at the end of each lesson in their textbook. The focus of the second textbook, *Programmed Reading* 1 (Buchanan, 1973), was on

reading comprehension with simple individual sentences and combinations of such sentences.

### 3.4. Procedures

Students in each class had two 50-minute class sessions a week with a grand total of 52 sessions all through the program. The whole program was divided into two major phases. In the first one, the purpose was to help students learn how to produce and relate 26 English basic sounds including vowels such as /æ/, /ʌ/, /I/ and /e/ along with the consonants to their corresponding written symbols. This phase lasted for three months and a half. The focus in the second phase was on sentence reading and comprehension. It continued to the end of the school year for another three months and a half. At different points, whenever appropriate and possible, students' achievement was tested through summative evaluation. The exact teaching procedures followed by the teacher (one of the present researchers) in the two phases are presented below.

**3.4.1. The First Phase:** Regarding the teaching procedure, as mentioned above, in each unit, the presentation of and practice on producing a vowel and two or more consonants made up the phonics part of the lesson. The relevant sounds in each unit were highlighted in a key word and practiced in as many words as possible. These words included the previously-practiced sounds as well. The teacher would carefully articulate the sounds while pointing to the relevant letters in the key word on the board. A flash card or drawing held by the teacher helped the process of showing meaning at the same time. Students' practice would consist of three successive steps: First, they would follow the teacher's model in producing the sounds of the head word while looking at and pointing to the relevant letters. This practice was in the form of individual and choral repetition. Second, the teacher would instruct learners how to write the letters of the key word while producing the sounds in focus. While practicing writing, learners were encouraged to sound the letters out. Finally, they would practice producing the sounds under focus in a number of new words of which all the symbols and sounds had previously been covered.

In the Look-Say part of the lesson, the teacher would introduce a number of words, names for some objects and animals, only by repeating them a number of times while showing the relevant flash cards. For each item, the teacher would give an affirmative sentence. Students would then have oral practice on those sentences by repeating after the teacher. In every next session, yes-no questions were used to check students' retention in a

cyclical manner. The objective in this part was to build up a vocabulary of words sharing the vowel under focus and to have some oral practice on language comprehension and production. Students were not exposed to the written form of the words used in the Look-Say part. This vocabulary in mind and the accompanying sentences were to be used as a language background in the next phase.

**3.4.2. The Second Phase:** Having gone through extensive practice on establishing correct sound-symbol relationships as the building blocks of reading, students were directed to reading comprehension at sentence level in the second phase. Individual sentences were the basic units of instruction and at times, combinations of short sentences were under focus, too. It should be mentioned that before continuing with the second phase, students were taught the names for English alphabet letters. This alphabet teaching and learning was a great help to the whole program since a number of important diphthongs were covered in this transitory step.

In each class session, the teacher would start with a brief explanation, in students' native language, of unfamiliar grammatical or lexical points. Then, students would be given time to read a number of sentences in one or two pages silently while using their background information gained in both parts of the previous phase. Afterwards, the teacher would read the sentences clearly to give a correct model with respect to sounding out the letters and intonation patterns. In the textbook (Programmed Reading 1 by Buchanan, 1973), sentences are written in a way that readers' understanding is continually being checked while they are reading the book. Numerous yes-no questions and blanks in statements were of great help in this regard. In the final stage, some volunteers would read the new sentences loudly. In each session, some students were asked to read some lines of the lesson; the teacher would grade their performance in this stage based on their ability to make sound-symbol relationships and their comprehension.

**3.5. Instruments**

In relation to the reading skill and its sub-skills, Rivers (1981) believes that two types of activities go by the name reading. One is "enunciating" (p. 261) the sounds symbolized by the written or printed letters. The reader, however, may not be drawing meaning from his or her enunciation. Thus, another activity is the process of drawing meaning from the combinations of words in the text. Chastain (1988), on the other hand, holds that there are two possible objectives for a reading program that is, establishing sound-symbol relationships and comprehension. Based on these contentions, the instruments were made in a way to gather information on students'

achievement regarding these sub-skills at an elementary level. Practically, the tests were to measure reading aloud, word meaning recognition, sentence comprehension, and very short text comprehension.

Test validity in all cases mentioned above was checked by monotrait-heteromethod validation, a simple variety of Multitrait-Multimethod approach (Henning, 1987). Henning maintains that if calculated correlations are significantly higher than zero, the tests measuring the trait in focus can be claimed to have "convergent validity" (p. 103). As for the reliability, KR-21 formula was used to examine the internal consistency of the instruments. The results of the validation process along with descriptive statistics are tabulated below.

Regarding achievement on making sound-symbol relationships, reading aloud was tested at sentence level. Items on the test included both familiar and unfamiliar words without any accompanying pictures. All the students in different groups were tested and graded individually by the teacher. The grading was based on correct sounding out of individual words and sentence intonation. Students had practice on intonation differences regarding statements and yes-no questions. Word stress was a constant factor since all the items covered had one syllable.

As for the higher processes of recognition and comprehension, there were three different tests at word, sentence, and suprasentential levels. Word meaning recognition was tested by items presenting a word as the stem accompanied by three pictures as choices. The students were asked to find the right picture for the object represented by the word in each item and then mark the correct choice on the answer sheet. Sentence comprehension was tested almost in the same way but in this case pictures were more elaborate presenting states, and actions. Still at a higher level, pictures with more details were used to measure comprehension at text level. On this test, learners were required to read combinations of short sentences in the stem and mark the choices on their answer sheets representing the situation given in the short texts. (See the appendix for a sample).

**Table 1: Descriptive statistics and KR-21 reliability indexes for the measurements.**

| Tests | Mean | Std. Deviation | $r_k$ | N |
|---|---|---|---|---|
| Word meaning recognition (20 items) | 17.63 | 2.70 | .75 | 30 |
| Sentence meaning comprehension (20 items) | 18.17 | 2.02 | .62 | 30 |
| Short text meaning comprehension (10 items) | 8.87 | 1.70 | .72 | 30 |
| Total (A battery of the above tests, 50 items) | 44.67 | 5.47 | .88 | 30 |
| Reading aloud (40 items) | 35.33 | 4.15 | .78 | 30 |

**Table 2: Correlations for the measurements.**

| Tests | Sentence meaning | Text meaning | Total (Battery) | Read aloud |
|---|---|---|---|---|
| Word meaning recognition | .651** | .637** | .887** | .828** |
| Sentence meaning comprehension | | .853** | .909** | .615** |
| Short text meaning comprehension | | | .894** | .575** |
| Total (A battery of the tests) | | | | .775** |

**. = Correlation is significant at the 0.01 level (2-tailed).

## 3.6. Data Analysis

As was mentioned above, the same teaching program was offered to all the groups in order to examine the applicability of the program and to compare the degrees of achievement in classes of various grades and sexes. Mean scores gained by each group on various measures were taken as indexes to check the applicability of such a teaching program at elementary level. To examine the effects of grade as an independent variable and sex as a moderator variable on developing reading ability regarding the major aspects of this skill mentioned above, the data were subjected to a series of 2-way ANOVA tests. The results obtained from these statistical analyses are given below.

## 4. RESULTS

### 4.1. Word Meaning Recognition

Mean scores on the word meaning recognition test for each class was higher than the criterion set by the study (75% of the total possible score). This was the case even when mean scores were calculated for boys, girls, $3^{rd}$-graders, and $4^{th}$-graders as separate whole groups. The results appear in Table 3.

**Table 3: Descriptive statistics of the word meaning recognition test.**

| Sex | Grade | Mean | Std. Deviation | N |
|---|---|---|---|---|
| Girls | 3 | 16.35 | 3.08 | 60 |
| | 4 | 16.33 | 3.17 | 40 |
| | Total | 16.34 | 3.10 | 100 |
| Boys | 3 | 17.63 | 2.70 | 30 |
| | 4 | 18.33 | 2.31 | 40 |
| | Total | 18.03 | 2.49 | 70 |
| Total | 3 | 16.78 | 3.00 | 90 |
| | 4 | 17.33 | 2.94 | 80 |

**Table 4: Tests of between-subject effects.**

| Source | df | F | Significance |
|---|---|---|---|
| Grade | 1 | .538 | .464 |
| Sex | 1 | 13.042** | .000 |
| Interaction of Grade and Sex | 1 | .621 | .432 |

The analyses through the two-way ANOVA test showed that the only factor producing significant differences was sex (F = 13.042, $p < .01$). The grade factor did not bring about any significant difference; neither did the interaction of grade and sex.

**4.2. Sentence meaning comprehension**

All groups gained mean scores higher than the criterion set by the study in the test on sentence meaning. Mean scores for boys and girls as whole groups surpassed the criterion, too. 3rd-graders and 4th-graders considered as separate whole groups succeeded to do the same.

The results of the two-way ANOVA test revealed that only sex difference had a significant effect (F = 12.096, $p < 0.01$). Educational level and its interaction with sex produced no significant difference.

**Table 5: Descriptive statistics of the sentence meaning comprehension test.**

| Sex | Grade | Mean | Std. Deviation | N |
|---|---|---|---|---|
| Girls | 3 | 16.32 | 2.56 | 60 |
| | 4 | 16.55 | 3.59 | 40 |
| | Total | 16.41 | 3.00 | 100 |
| Boys | 3 | 18.17 | 2.02 | 30 |
| | 4 | 17.88 | 3.11 | 40 |
| | Total | 18.00 | 2.68 | 70 |
| Total | 3 | 16.93 | 2.54 | 90 |
| | 4 | 17.21 | 3.40 | 80 |

**Table 6: Tests of between-subject effects.**

| Source | $df$ | F | Significance |
|---|---|---|---|
| Grade | 1 | .004 | .949 |
| Sex | 1 | 12.096** | .001 |
| Interaction of Grade and Sex | 1 | .331 | .566 |

### 4.3. Short text meaning comprehension

Regarding the test on reading comprehension above sentence level, once again all classes gained mean scores higher than the criterion. Boys, girls, $3^{rd}$-graders, and $4^{th}$-graders as whole groups could score higher than the criterion, too.

Results gained through the two-way ANOVA test once more revealed a significant effect for the sex factor (F = 4.681, $p < 0.05$). Grade and the interaction of grade and sex did not cause any significant effect.

**Table 7: Descriptive statistics of the short text meaning comprehension test.**

| Sex | Grade | Mean | Std. Deviation | N |
|---|---|---|---|---|
| Girls | 3 | 16.60 | 4.07 | 60 |
| | 4 | 16.60 | 4.94 | 40 |
| | Total | 16.60 | 4.42 | 100 |
| Boys | 3 | 17.73 | 3.39 | 30 |
| | 4 | 18.25 | 3.51 | 40 |
| | Total | 18.03 | 3.45 | 70 |
| Total | 3 | 16.98 | 3.88 | 90 |
| | 4 | 17.43 | 4.34 | 80 |

**Table 8: Tests of between-subject effects.**

| Source | $df$ | F | Significance |
|---|---|---|---|
| Grade | 1 | .161 | .688 |
| Sex | 1 | 4.681 | .032 |
| Interaction of Grade and Sex | 1 | .161 | .688 |

### 4.4. Reading aloud

Mean scores gained by all the groups in the reading aloud test were higher than the set criterion. The case was the same even considering boys, girls, $3^{rd}$-graders, or $4^{th}$-graders as separate groups.

No variable was found to bring about any significant difference in the performance of the groups on the reading aloud test. F ratios were not significant at any acceptable level of confidence.

**Table 9: Descriptive statistics of the reading aloud test.**

| Sex | Grade | Mean | Std. Deviation | N |
|---|---|---|---|---|
| Girls | 3 | 17.38 | 2.59 | 60 |
| | 4 | 17.58 | 2.00 | 40 |
| | Total | 17.46 | 2.36 | 100 |
| Boys | 3 | 17.67 | 2.07 | 30 |
| | 4 | 17.83 | 2.93 | 40 |
| | Total | 17.76 | 2.58 | 70 |
| Total | 3 | 17.48 | 2.42 | 90 |
| | 4 | 17.70 | 2.50 | 80 |

**Table 10: Tests of between-subject effects.**

| Source | df | F | Significance |
|---|---|---|---|
| Grade | 1 | .201 | .655 |
| Sex | 1 | .466 | .496 |
| Interaction of Grade and Sex | 1 | .002 | .966 |

## 5. Discussion, Conclusions, and Implications

Regarding the research questions and the corresponding findings of the study, the following points can be logically raised.

Mean scores gained by the groups participating in the study all surpassed the criterion for success set by the study. This success was determined by groups' satisfactory performance on the tests previously verified to be measuring different conceivable reading sub-skills at the elementary level including the skill in making acceptable sound-symbol relationships, word recognition ability, and short sentence and text comprehension. Group mean scores on the tests measuring theses constructs were all higher than 75% of the perfect score possible not only for individual classes but also for boys, girls, 3rd-graders, and 4th-graders if considered as whole groups.

The observed differences in the groups' performance with respect to different measures corresponding to various phases of the teaching program were all among mean scores above the cut-off point pre-determined in the study.

The pedagogical conclusion in this regard is that the reading-based teaching program devised to teach English as a foreign language in the elementary school was capable to help primary school students of both sexes develop basic reading sub-skills corresponding to the objectives of the program. This applicability leads to advisability, too. The rationale for its

advisability comes from the studies showing that there is a direct correlation between the amount of time allocated to foreign language study and the language proficiency attained by language learners (Curtain and Pesola, 1988, cited in Curtain, 1990). Findings of such studies clearly provide support for early foreign language study at the elementary level. The argumentation developed in these studies is that children who receive foreign language instruction in elementary school and continue studying the foreign language afterwards are more likely to develop a high level of proficiency than those who start studying foreign language in school years after the elementary level. The point is quite clear that gaining a high level of proficiency in a language such as English entails academic, social, and economic benefits.

Moreover, studying a foreign language under a reading-based program requires the use of learning strategies necessary for acquiring a new sound system along with those essential for working out meaning that is shaped in quite new syntactic configurations. Such strategies can only be developed through cognitive enhancement at the same time as children are experiencing their normal cognitive development.

Educational level as the main variable in this study had no considerable effect in producing significant differences since 3rd-graders and 4th-graders in both sex sections did not perform differently on any of the measures. Considering the points raised above and in relation to the question of grade effect, the implication is self-evident. Regarding the findings of the study, the threshold to be suggested for this English teaching program at the elementary level is grade 3 for both sexes. Grades 4 and 5 are convenient levels to extend this teaching program to cover an increasing number of lexical and syntactic items and to contextualize those items in increasingly lengthened texts around themes and topics of children's interest. The language knowledge present in such graded texts at any stage can provide an interesting and available basis to work and practice on other language skills systematically.

In relation to sex differences, the findings clearly revealed that boys outperformed girls in word meaning recognition, sentence meaning comprehension, and text comprehension. In reading aloud, however, students in both sex groups performed more or less similarly with no significant difference. In other words, on tests of meaning recognition and comprehension considered to be the basic sub-skills of reading, boys did better than girls. However, with respect to making correct sound-symbol relationships, no important difference was observed.

The trend in the findings clearly goes by contraries (The reader is referred to the relevant issue raised in the literature review). The commonly-held belief is that girls are better language learners than boys. However, common beliefs are not always empirically supported. There are, in fact, contradictory findings in relation to the effect of gender variable on language learning.

Nyikos (1990) believes that the effect of sex variable depends on the task to be carried out in the target language and also the conditions under which the task is to be performed. From among the circumstances under which language learning tasks take place especially in formal settings, an influential one is the gender of the teacher. In this regard, 'the interaction of sex-of-teacher effect with sex-of-subject effect' (p. 274) is proposed as a determining factor in shaping sex-related differences in the language learning process. Quite in line with what is found in this study, Cross (1983) has also found significant effects for sex differences in favor of boys, contrary to generally-maintained expectations. He, too, has attributed sex differences in language learning to the effect of the teacher gender.

As it is mentioned above, the teaching program in this study was put into practice by one of the researchers, a male. In the practical course of affairs, the above-mentioned interaction of sex-of-teacher effect with sex-of-subject effect was quite tangible. The interaction effect was to the extent that in some cases it would bring about serious difficulties for the practitioner while teaching girls. With respect to the research background and the practical observation of this interaction effect, it is set forth as one of the strongly justifiable reasons for boys' superiority to girls in their performance.

Not overlooking the fact that all groups performed satisfactorily on the tests, the suggestion is that with the same teaching program, teachers of both sexes should be adequately trained to handle classes in boys' and girls' primary schools if a sort of educational balance regarding achievement and proficiency is desirable. The issue is even in line with the general policy adopted by the Education Organization in relation to assigning teachers to schools of different sexes. Since the reading-based English teaching program is suggested by this study to be included in the regular teaching schedule of primary schools as a part of public education, bringing about and maintaining such a balance in achievement seems to be not only desirable but also quite necessary.

## APPENDIX

**Sample items from word meaning recognition test:**

**map**



**Clock**



**bus**
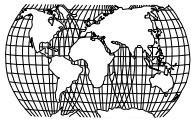


**fish**

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