



Rhymed stories and vocabulary input in first language acquisition

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Abstract

The present study is an effort to focus on Iranian infants' vocabulary learning in their first language (Farsi) acquisition. It is going to show how by the aid of rhymed stories as a source of input, the enhancement of prosodic skills in children is to affect the formation of a broader knowledge of vocabulary in them. To this aim, the sample of 12 Iranian (Farsi Speaking) children between (24-36 months) were selected and divided into two groups each one consisting of six- three girls, three boys. The experimental group – by the help of their parents – were provided with some vocabulary items through rhythmic or prosodic stories designed by the researchers of the study for this specific purpose. The comparison group were given the same vocabulary material through the same stories but told in everyday language and not foregrounded by rhythmic language or explicit prosodic features. They received the input for several times within a week through their parents and finally in-depth interviews were held to collect the data of the present study; what revealed that the children in the experimental group had a greater knowledge of the new vocabulary items they were exposed to through rhymed stories.

Keywords: first language acquisition, vocabulary, input, story, prosody and rhythm

1. Introduction

Reading story books to young children might be taken to have many benefits for them as it can be helpful in getting familiar with new vocabulary items. Research has shown the fact that pre- school children can recall the specific rhyming words of the story more easily than the other details (Hayes et al., 1982), as they gradually develop the ability to “sustain their attention” alongside with enhancing their “active imagination” through winning mastery over “narrative conventions” (British Columbia Health Link BC, q.t.d in Mullen, 2017, p.47) and sound patterns of their mother tongue. As a matter of fact, such an enhancement is to be witnessed because music is engaging and attention-grabbing (Tierney and Kraus, 2013) and can function as mental stimuli, able to foreground: the very characteristics which in consequence might effectuate positively the vocabulary learning context

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provided for the learners through stories. This viewpoint can be claimed to be favored by several researchers who believe that children have a double capacity, in comparison to adults, and pick up much from the input (Doughty & Long 2003) exposed to them and can make use of it in their attempt to gain mastery over the complex system of language (Saffran et al. 1996). Briefly stated, it may be deduced from their assumptions that children can rely on the vocabulary input highlighted through rhythmic stories as contextualized lexicons or encyclopedic sources; what they have the ability to expand analogously to broader contexts for usage as they go on improving their vocabulary knowledge.

Drawing on all the above-mentioned assumptions, it is not hard to infer why in recent years researchers have found the necessity of focusing on the issue of the relation between phonemic awareness in children – made possible by a series of complex mental and auditory syntheses – and the ‘phonological’ properties of language (Kay, 2016); what can help them improve their vocabulary knowledge in advance. For instance, in a study by Katherine Stover, it has been tried to answer “whether exposure to rime or repetition strategies would enhance children’s ability to correctly pronounce novel words and non-words (2015). Similarly, another research has concentrated on the degree to which everyday plays and games for children; games like singing songs, listening to stories and telling stories to others , as well as making rhythmic units (NYS Education Department, 2016), can help them concretize phonological patterns of their language and sequentially a broader knowledge of the vocabulary items. Relatedly, to reaffirm the validity of such a viewpoint it can be pointed to a more recent study by Robin O’Leary in the field (2017) which has revealed much about the subject by focusing on how the “memory for vocabulary words” might be improved when the knowledge of the sound or rhythm associated with the constituent letters of each word is enhanced in children.

Despite all that have been done up to know in case of studying the matter of ‘rhymed vocabulary input and infants’, it might be claimed that many gaps are still be traced in the field. As once a critic asserted the existence of such gaps can be said to be caused by the fact that much is yet unknown about the process of the first language acquisition itself (Lust, 2006); what is in reality caused by the impalpability of the internal co-relative mental syntheses bringing about such a process as well as the innate features of each language and its phonological characteristics. Furthermore, there is another important factor which shall not be ignored: the existing differences between learners and various potentials in them affecting the output in consequence. Taking into account these facts, it can be postulated that in order to fill those gaps a researcher needs to avoid overgeneralizations at many points; presumably, something to be possible when the provided vocabulary inputs are managed carefully based on the nature of each language. To be precise, it shall be defined how and why the items provided to be exposed to each group of learners as input are come along with.

According to the aforementioned explanations, and in an attempt to bridge the existing gaps in dealing with the issue of ‘rhymed vocabulary input in first language acquisition’, this study is an attempt to draw on some of the less investigated aspects of the field. Briefly stated, it is going to be examined



how the familiarity of Farsi speaking infants with prosodic skills or better to say prosodic competence and receiving input through stories equipped with rhymes and meter can affect the formation of a broader knowledge of vocabulary in infants in the process of learning Farsi, their first language.

1.1. Research Questions

The purpose of this study is to find how by the aid of rhymed stories as a source of input, the prosodic skills in children are going to be enhanced and how this factor by consequence is going to affect the formation of a broader knowledge of vocabulary in the first language acquisition process. These questions then can be introduced as the research questions:

1. To what extent can rhyme and prosody (prosodic competence) act as important factors in the process of first language acquisition for Iranian (Farsi speaking) children?
2. How can the type of input (vocabulary exposed through rhymed stories) affect the infants in the process of the acquisition of their first language (Farsi)?

2. Methodology

2.1. Participants

Participants included 12 Iranian children (6 females and 6 males) between (24-36 months) who were all learning Farsi as their first language. They were chosen from among a group of 18 infants. The study occurred at a mean age of 30 months and all the participants had both cognitive development in the normal range– six were excluded after the analyses. It is necessary to highlight at this point that in the way of grasping a valid and reliable sample some factors were taken into account: Initially, so as to check the homogeneity of the participants, an IQ test according to Raven's Progressive Colored Matrices (Raven, 1998) was hold before grouping. Additionally, a T-test was performed based on the results and the upcoming Standard Deviations. Furthermore, those children's knowledge of vocabulary was examined in separate interviews by the presence of their parents in order to decide on the vocabulary material for the study. Taking into consideration all these factors, the participants were categorized into two groups of six – each one consisting of three boys and three girls to control the probable heterogeneity of sampling: caused by gender.

2.2. Instrumentation and Data Collection Procedures

To collect the data, the experimental group was provided with certain vocabulary input through rhymed stories in form of poems or prosaic texts. The comparison group members were exposed with the same vocabulary input through the rewritten material of the rhymed stories provided for the experimental group but in ordinary non-rhythmic language.

In order to make the children ready for an interview containing vocabulary test items, the instrument chosen for conducting the present study, some issues had to be controlled at the beginning: Primarily, it was necessary to check if optimal exposure to the vocabulary items are allotted to each infant

or not. Additionally, it had to be found that the answers provided by them is not the outcome of recall, a kind of conditional response or from another perspective, and the result of their reliance on their short-term memory. Having in mind these matters – plus the fact that the role of “parents and home experiences” cannot be denied in fostering readiness in children when it comes especially to phonological recognition and understanding rhyme (Orillosa, 2014) – before the interview the parents were provide a one week period for exposing the new vocabulary items to their children. To enhance the validity of the procedure, the frequency of vocabulary exposure was controlled: parents were had to read the vocabulary items twice a day to their children – with at least eight to ten hours distance – within the period of the experiment week.

Getting to know about the frequency and format of exposure, it is also necessary to find about the content of the input. Here is a sample of the song – translation of the original Farsi one – parents were asked to expose to their children in the experimental group:

*Banana, Banana on tree grow, Banana yellow and mellow
Mellow is Ripe, Ripe, mellow, Child honey the Banana show!
Banana, Banana on tree grow, Banana yellow and mellow
A tree with big leaves , Green, Green
Banana first Green, Yellow then Slow
Banana, Banana on tree grow, If Sick, Banana Good, you shall Know*

After Each exposure, the parents were then to ask some ‘fill in the blank’ questions in order to check the output. For example, in case of the above-mentioned story:

- A. *Banana grows on -----.*
B. *Banana is ripe. It is -----.*

The comparison group had the exposure to the same vocabulary item, as well as the same kind of ‘fill in the blank’ questions, but this time the story was not highlighted by rhyme and was close to everyday language in tone:

Banana is a fruit that grows on a tree with big leaves. Child, you know, Banana is first green and gets yellow when ripe or mellow. Banana, which grows on tree is a good fruit to take when you are sick.

- A. *Banana grows on -----.*
B. *Banana is ripe. It is -----.*

The experiment continued for a week. However, by its end, three days of intentional pause or non-exposure to the input material were planned. It was in fact intended to lessen the effect of short term memory. Therefore – on the tenth day after the first exposure – each infant was separately put into an interview. Each interview was then designed to last for about 15 minutes – with the presence of parents that aimed at reducing the anxiety level in children. The parents had an active role in the performance of the



experiment (interview), themselves as they were required to give the provided tests to their child. For the experimental group, the parents had been given some semi- questions to ask from their child about the vocabulary materials they had been exposed to through rhymed stories. For example, one item was based on the very story about Banana. After reading a story about 'Banana', each child was asked to answer some 'fill in blank' questions, already familiar with during the week of the experiment. Secondly, to make for another test item, which was new, the children were given two cards one with picture of a green banana on a tree and the other of a ripe banana. Each child was then asked to choose the ripe banana. Two series of tests for each item were then prepared for each infant.

The children in the comparison group were provided with the same kind of tests by their parents. The only difference was that in the same manner as the week of exposure the new material prepared for tests was not in form of prosaic texts, poems or songs: They were in fact, new versions of the same stories but not this time with no dominant rhythm or metric feature.

Here at this point, it seems rather necessary to highlight a matter: In case of the interview, the tests were designed based on the same vocabulary items exposed to the children by their parents: with rhyme and meter for the experimental group and in ordinary everyday oral language for the comparison group. However in order to guarantee the reliability of the results and in order to reduce the probable effects of 'recall' brought about by contextual similarities, vocabulary materials exposed earlier by parents to their children were blended at different levels. For example, the test item 'the story of Banana' – mentioned above – which was in the first instance the rewording of the part of the very story about fruits they had heard during the week of exposure was merged into another story about animals, exposed by parents to children later than the former story in a consequent session. To clarify the matter more, it is good to refer to some part of the English translation of the Farsi song used in the interview for the experimental group based on the story of 'Banana' and 'Monkey':

*A ripe ripe banana I had picked
Picked from a -----, I had picked
A ----- with a long tail, naughty animal
Came and stole what I had picked*

Taking into account what went on above, it is to be inferred that simply each infant's responses to the tests, designed in accord with the vocabulary items exposed to them, were taken to be the defining criteria for data collection in the present study. However, in order to authenticate the validity of the data collection process, conducted through vocabulary test items, they were checked based on Messick's 'Validation Theory' (1989). Additionally, all of the interviews were recorded by sound recorder as well as a camera so as to make the documentations more authentic and reliable. The whole interviews were then fully transcribed according to MacWhinney's (1991) *Child Language Data Exchange System* (CHILDES) format as the transcriptions were necessary to be at hand during the analyses. Furthermore, to decide about the effective factors or criteria to be put into evaluation, some recent

studies – e.g Mudawi, G. H. H. (2015), and Liza Lee and Shu-Chuan Lin (2015) – were checked. Additionally, it shall be noted that these studies were also much illuminating regarding their data collection procedures as well as their adopted approaches to define necessary evaluation factors. As a result, some categories or factors were inferred on a deductive basis; factors like: the degree to which each child was able to fill in the blanks, his or her speed, confidence and assurance in answering. Relatedly, the pauses, repetitions, corrections plus the attempts by each infant in order to take feedback or reassurance from his or her parents were also found as necessary factors to be put into consideration in the process of data analysis.

The data collected based on the above-mentioned criteria were then tabulated in this format:

Table 1
Experimental Group, Test 1

Childre n Numbe r	Accurat e Answer s	Speed/Paus e (Seconds)	Partial Answer s	Self- Correctio n	Feedback /Reassuran ce	Wrong Answer s
1	✓	0	✗	✗	✗	✗
2	✓	10	✓	✓	✓	✓
3	✗	35	✗	✗	✗	✗
4	✓	18	✓	✓	✗	✗
5	✓	16	✓	✓	✗	✗
6	✗	26	✗	✓	✓	✓

Table 2
Experimental Group, Test 2

Childre n Numbe r	Accurat e Answer s	Speed/Paus e (Seconds)	Partial Answer s	Self- Correctio n	Feedback /Reassuran ce	Wrong Answer s
1	✓	20	✓	✓	✓	✗
2	✗	32	✓	✓	✓	✓
3	✓	27	✗	✗	✗	✗
4	✓	25	✓	✓	✗	✗
5	✓	8	✗	✗	✗	✗
6	✓	18	✓	✓	✓	✗



Table 3
 Comparison Group, Test1

Children Number	Accurate Answers	Speed/Pause (Seconds)	Partial Answers	Self-Correction	Feedback/Reassurance	Wrong Answers
1	✓	20	✓	✓	✓	✗
2	✗	35	✓	✓	✓	✓
3	✗	35	✗	✗	✗	✗
4	✓	23	✓	✓	✓	✗
5	✗	40	✓	✓	✓	✓
6	✓	28	✓	✓	✓	✗

Table 4
 Comparison Group, Test 2

Children Number	Accurate Answers	Speed/Pause (Seconds)	Partial Answers	Self-Correction	Feedback/Reassurance	Wrong Answers
1	✗	30	✗	✗	✓	✓
2	✓	19	✗	✗	✗	✗
3	✓	28	✗	✗	✗	✗
4	✗	18	✗	✗	✓	✗
5	✓	24	✓	✓	✓	✗
6	✓	16	✓	✗	✓	✗

2.3. Data Analysis

In order to examine the application of rhymed vocabulary input, in the formation of a broader knowledge of vocabulary in the process of the first language acquisition in infants from 24 months to 36 months old, the tabulated raw data gathered through comparing the records of the interviews, were analyzed through descriptive analysis.

3. Results

The garnered (tabulated) data was in consequence statistically analyzed and the results showed that 75% of the test answers provided by the children of the experimental group were correct while 58.3% of the answers by children in the comparison group were accurate. Additionally, in case of “the Pause”, the “Mean” for the experimental group was 21 seconds in comparison to 26.3 seconds for the other one. Sequentially, concentration on the average percentage of the ‘partial answers’, provided by the infants in the two groups indicated the fact that they were not different in this case. Further analysis revealed that the children in the experimental group needed the parent’s feedback or reassurance so as to come up with an answer, in 41.6% of the whole tests while in the other group the percentage was 75%. Finally,

focusing on the issue of “the Corrections”, the numbers revealed that in 66.7% of the whole tests children in the experimental group tried to correct themselves and the percentage of success in correction was 41.6% while for the comparison group the former was 75% and the latter was 33.3%. Taking into consideration the gathered data, the following charts (figures) were provided to represent the findings of the study:

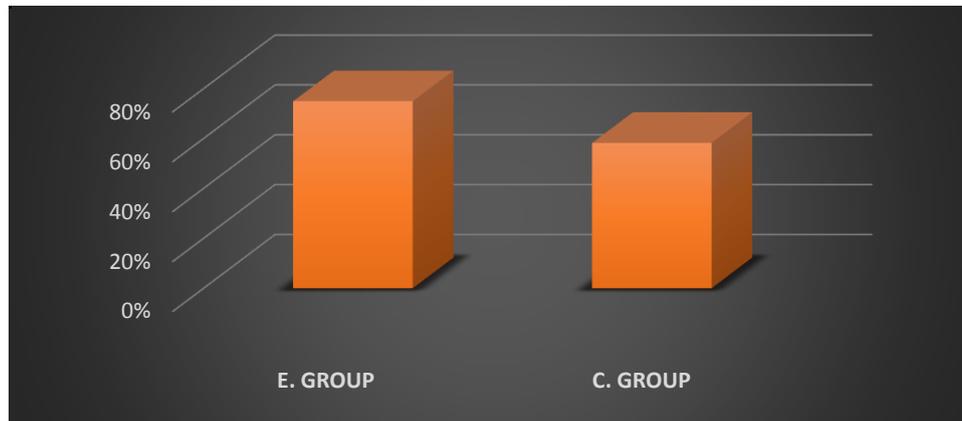


Figure 1. Correct Answers

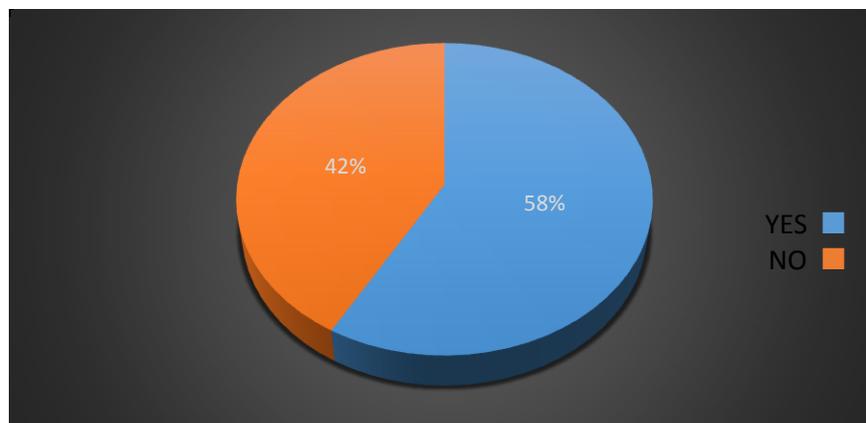


Figure 2. Partial Answers (E. Group)

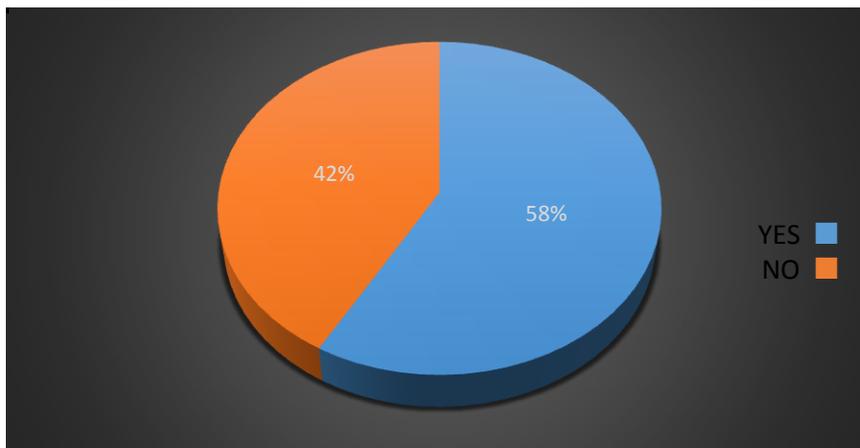


Figure 3. Partial Answers (C. Group)

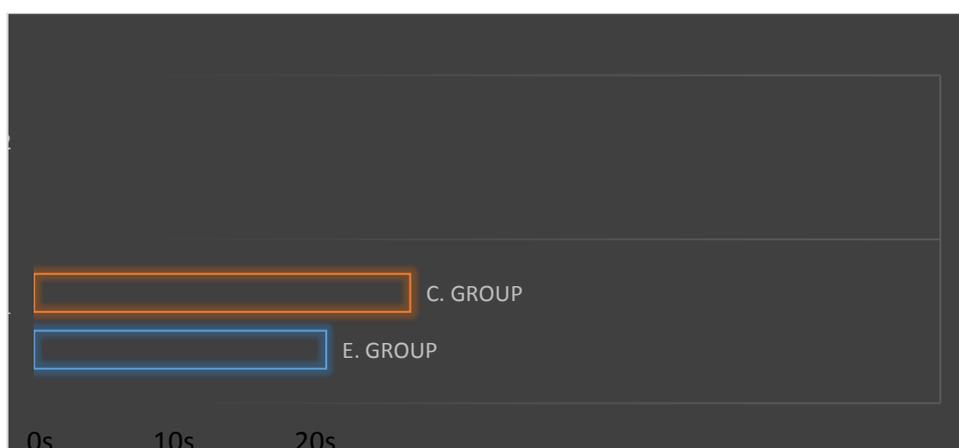


Figure 4. Means (of pauses)

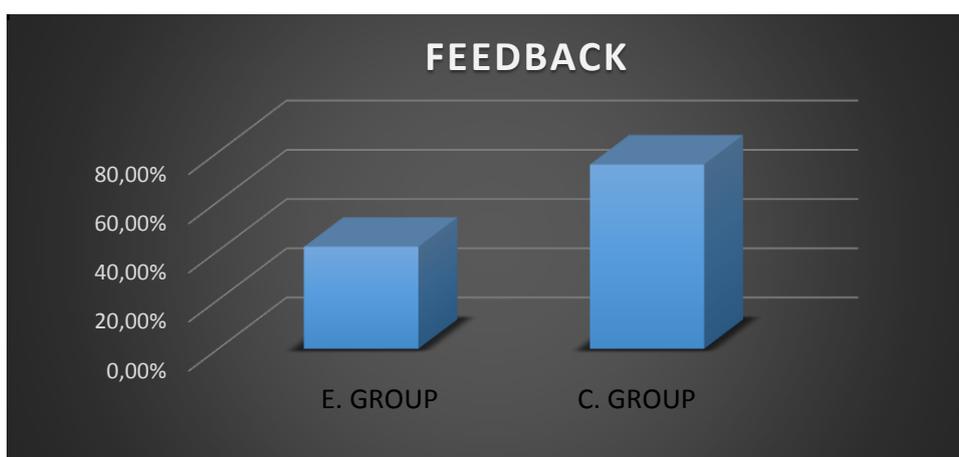


Figure 5. Feedback

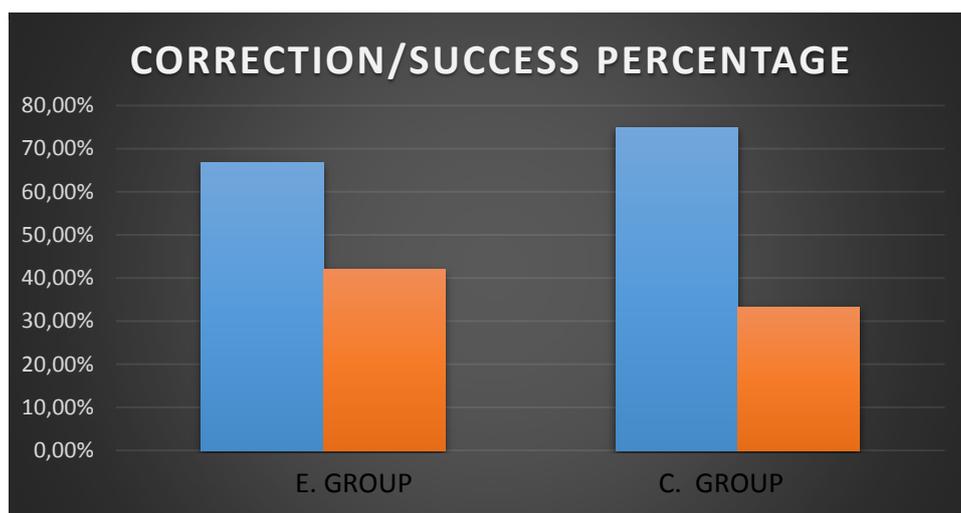


Figure 6. Correction/ Success percentage



Figure 7. Correction/ Success percentage

4. Discussion

The goal of this study was to focus on Iranian infants' vocabulary learning in their first language (Farsi) acquisition and how the process might be facilitated by the aid of rhymed story books as a source of input, taking into account the assumption that such a procedure is to enhance their prosodic skills; what is consequently to bring about the formation of a broader knowledge of vocabulary in them. Analyzing the collected data could then provide a reliable basis in order to answer the research questions of the present study. Definitely, 'Data Analysis' revealed the followlling outcomes :

- The total percentage of the correct answers provided by the children in the two groups for the two Tests – as represented in Figure 1 – indicates that rhymed vocabulary inputs can enhance the vocabulary learning process since a 16.7% decrease was probed. Another way, Infants in the Exprimental Group were more sucessful than those in the Comparison Group in answering correctly.



- Children in the Experimental Group had less hesitations and pauses than the Comparison Group in answering as the average pause time for the children in the Experimental Group was 21 seconds while it was 26.3 seconds for the comparison group (Figure 4). Additionally, putting into analysis the data in case of the pauses, it can be found that more children in the Comparison Group needed longer period of pauses or hesitations than the children in the Experimental Group. This is much significant and sheds light on the fact that children in the Comparison Group had much more difficulty or problem in dealing with the vocabulary items in the provided tests. Besides, the category of 'partial answers' (indicated by Figure 2 and Figure 3), must also be taken as important here despite the fact that the data revealed no difference between the two groups in this case. In fact, such an equality can be claimed to be accidental as it has not been affecting the category of 'pause' or 'hesitation'. In other words, if it was an effective item, the way it could alter, modify or condition other categories like 'pause' or 'hesitation' had to be testable.
- Children in the Experimental Group needed less feedback or reassurance from their parents than the children in the Comparison Group so as to answer the tests. As indicated by Figure 4, for the Experimental Group the total percentage of 'feedback' is 41.6% while it is 75% for the Comparison Group. This can be a good confirmation to the fact that rhymed vocabulary input is to have positive effects on the process of acquisition since it can be inferred that children, in the experimental group, can recall the vocabulary items faster; that is why not only they have less pauses in their process of coming up with the answers to the provided vocabulary tests, but also need less assurance, repetition, feedback or confirmation from their parents to help them conquer their doubts or undecidedness.
- According to Figure 6, the average percentage of attempts done in the way of self-correction by the children in the Experimental Group is 66.7%, while it is 75% for the other group. It is not hard to guess that it is their success in providing more correct answers with less pauses and need for less feedbacks in sum, that leads to such a result. However, it is important to note that the higher percentage of attempts done so as to correct themselves has another implication besides representing the comparison group children's less effective vocabulary acquisition procedure. Factually, as Figure 7 depicts, the lower percentage of their success in self-correction, 33.3%, in comparison to the due percentage for the experimental group, which is 41.6, is another proof that sheds light on the effectiveness of rhymed vocabulary input and how it can facilitate the formation of a broader knowledge of vocabulary in children.

5. Conclusion

This study was an attempt to bridge some of the existing research gaps regarding the issue of 'rhymed vocabulary input in first language acquisition and infants'. To this aim, and bearing in mind the relativity of the matter

and how the linguistic, and contextual variables as well as individual learner's characteristics and learning potentials may affect the results, the present study focused on Iranian infants' vocabulary learning in the process of developing their Farsi learning competence and the way rhymed story as a source of input can facilitate the formation of a broader knowledge of vocabulary in them. The analysis of the data gathered from the experiment indicated that there is significant relation between the level of vocabulary acquisition in children and how they were exposed to vocabulary items. Precisely, it was revealed that children who were provided with new vocabulary items through rhymed story books – narrations done by songs, poetry or via a language with foregrounded prosodic features – were much more successful in acquiring the new vocabulary items than those other exposed to the same vocabulary materials by the aid of stories told in the ordinary or everyday language. The findings also showed that not only the children who had been exposed to the vocabulary materials through rhymed story had acquired much vocabulary materials than the other children in the experiment, but also they showed greater confidence and assurance in tests conducted based on the new vocabulary materials they had absorbed as more speed in answering, much ability in self-correction and less need for feedback from their parents were what their monitoring revealed in comparison with the children in the other group.

Accordingly, at the end, it can be asserted that what was noticed earlier in the research questions of this study has been examined to a great extent in the process of the experiment done. In fact, it can now be claimed that rhyme and prosody (prosodic competence) act as key important factors in the process of first language acquisition of Iranian children and can play a great role in the process of the development of these children's vocabulary knowledge.

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Appendix I

Sample Farsi Song Used in the Study as Input for the Experimental Group:

موز که پخته، شیرینه
باغبون اونومی چینه
از درخت پراز برگ
برگ های سبز و خوش رنگ
موز پخته که زرده
داروی هرچی درده

Appendix II

Sample Farsi Story Used in the Study as Input for the Comparison Group:

موز یه میوه است که روی یه درخت با برگ های بزرگ سبز میشه. عزیزم میدونی موز اول رنگش سبزه و وقتی پخت و کامل رسید رنگش زرد میشه. وقتی مریض میشی موز مثل داروست و خیلی برات خوبه.

Appendix III

Sample Farsi Questions Asked after Each Story:

- A. موز روی ----- درمیاد.
B. موز وقتی رسیده است رنگش -----؟

Appendix IV

Sample Farsi Song Used in Interview:

یه موز پخته چیدم
از ----- من اونو چیدم
یهو ----- شیطونه دم دراز
قاپید اون موزی که چیدم