

Acquisition of English anaphora by Iranian EFL learners

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Abstract

The present study examined the acquisition of anaphora in English by Iranian EFL learners as well as Persian speaking children. To do so, the study was conducted in three phases. In the first phase, 40 intermediate female and male EFL learners were selected from Puyan Institute in Takestan, Iran. Then, an off-line based Grammatical Judgment Task was administered. In the second phase, 40 female and male children from Nazanin Kindergarten in Takestan, Iran with the average age of 5 were selected and were asked to participate in an on-line based Grammatical Judgment Task. In the third phase, 40 female and male children from Shadooneh Kindergarten in Takestan, Iran with the average age of 4 were selected and were handed picture selection task. The results of the study revealed that both EFL learners and Persian speaking children had the Chomsky knowledge A. This study may have implications for teachers, students and curriculum designers.

Key word: Chomsky Principle A, Chomsky Principle B, Reflex

Introduction

Concerning the importance of linguistic, Chomsky (1981) has established two practical principles (well-known as principle A & B) on distribution and interpretation of reflexives and pronouns. Principle A deals with reflexives and Principle B deals with pronouns.

Principle A: Reflexives must be bound in their binding domain.

Principle B: Pronouns must be free in their binding domain.

In fact, Principle A allows people to use reflexives when subject and object are co-reference. It is not allowed to refer to any other individuals. Principle B is used when subject and object are disjoint. That is, the pronoun cannot refer to subject and it must refer to other individual.

Prince and Smolensky (2004) established Optimality Theory (OT) claiming that by regarding a given input, a set of possible outputs will be generated. These possible outputs are evaluated on the basis of constraints. Constraints in OT are potentially conflicting, soft (i.e. violable) and ordered in a hierarchy according to their strength. If two constraints are in conflict, it is more important to satisfy the stronger constraint than the weaker constraint. The candidate that performs best in this competition is the optimal candidate. This is the output for the given input. All other candidates must be rejected. Because the constraints are potentially conflicting, it is possible that the optimal candidate also violates one or more of the constraints. Therefore, constraints in OT must be violable: a constraint violation is not always fatal. It only renders a candidate suboptimal if its competitors do not violate this constraint and behave similarly with respect to stronger constraints. For the present purposes, an important property of OT is that it can model both language production and language comprehension. In language production, the input is a meaning and the output is a form. Conversely, in language comprehension, the input is a form and the output is a meaning (Hendriks & Spenader, 2005).

Based on OT, children's understanding of reflexives and pronouns is unidirectional; that is, there is an asymmetry between comprehension and production of reflexives and pronouns while adult understanding on reflexives and pronouns is bidirectional (Chien & Wexler, 1990; Grimshaw & Rosen,

1990; Jakubowicz, 1984; Kaufman, 1992; Koster & Koster, 1986; McDaniel & Maxfield, 1992, McDaniel, Smith Cairns & Hsu, 1990; McKee, 1992).

According to Guasti (2002), children are able to interpret reflexives in an adult manner when they are at the age of 3 and they are able to interpret pronouns around age 6. A well-established finding from previous research on child language acquisition concerns an asymmetry in children's offline referential interpretations of reflexives and (non-reflexive) pronouns. Several studies on languages such as English, French, and Dutch using offline picture-matching, truth-value judgment, and act-out tasks have been conducted. Consequently, children interpret reflexives in an adult-like manner, whereas their interpretation of pronouns remains non-adult-like until around six years of age.

In many countries, there are large value of investigation on reflexives and pronouns, but there are not enough studies on the process of comprehension and pronouns of Iranian L1 and L2. In this regard, the objectives of this research are to shed light on the evaluation of adult Iranian English learners (L1) and Iranian children's (L2) knowledge of Chomsky's Principle A. In fact, there is an attempt to study the comprehension and production of reflexives and pronouns by Iranian L1 and L2.

Statement of problem

For a language user what matters above all linguistic points is the natural use of a language. Since individuals are under the influence of their first languages and their own cultures when learning a second/foreign language, acquiring some structures of that language is a very difficult task.

In addition, the grammars of English and Persian languages have both similarities and differences. Through these similarities and differences, Persian speakers face some difficulties and misunderstandings in their English learning process. In fact, existence of these difficulties is caused by lack of students' knowledge. One of these difficulties is related to learning and comprehending anaphora because most learners have difficulty in distinguishing the appropriate one. In other words, some students "do not know the exact place to put it" (Mirhassani, 2001, p. 101). This cause "a tendency towards a learner's preference in selecting a special category while avoiding another and this causes different types of errors" (Rahbarian, Oroji & Fatahi, 2013, p. 212). In this regard, this study aims to find out what is the role of Chomsky principle A knowledge on the acquisition of anaphora.

The contribution of grammar knowledge to the production and comprehension of reflexives and pronouns may be beneficial for teachers, material developers, as well as EFL learners. First, teachers can understand the necessity of having each Chomsky's knowledge and can equip their curricula with them in order to help students' problems and improve their comprehension, by working on students' grammar knowledge.

Second, material developers can add relevant grammar notes to their syllabus at class. Third, EFL learners can improve their comprehension of reflexives and pronouns by building up their grammar knowledge. They can also find the roots of some of their comprehension problems in their lack of grammar knowledge.

Research question

This study is aimed to answer the following questions:

- Do Persian speaking children have knowledge of Chomsky' principle A?
- Do Iranian EFL learners have knowledge of Chomsky' principle A?

First and second language acquisition models

In the study of first language acquisition, there exist two extreme poles. One extreme is behaviorist model pole and the other is constructivist model pole. The behaviorists claim that children come into the world with a tabula rasa, a clean slate bearing no perceived notions about the world, and that these children are then shaped by their environment and slowly conditioned through various types of reinforcement (Brown, 1987).

The constructivists claim that children come into the world with very specific innate knowledge, predisposition, and biological timetables and learn to function a language chiefly through interaction and discourse (Richards, 1985).

However, learning a second language does not follow these models. There are literally many millions of individuals engaged in the learning of a language which is different from their mother tongue. Some may pursue this activity independently outside formal classroom, but most foreign/second language learners enroll in institutionalized instruction of some sort. Nevertheless, second/foreign language learning will follow one of these models: monitor model and holistic model.

In monitor model, there is a conscious knowledge of language which monitors the language user's use of language. This conscious knowledge cannot produce the language, it only screens or edits. It screens before the learner produce and edit after production (Krashen, 1988).

The holistic model, presented by Rinzo Titone (1993), focuses on the combination of positive points of different approaches including behavioristic, cognitivistic and humanistic psychologies. This model expresses that language learning happens in three hierarchical layers: tactic, strategic and ego-dynamic. The tactic layer involves acquiring or getting skills. The strategic layer is responsible for rule learning and rule formation and application. The ego-dynamic layer insists on the personality of the learners. Therefore, learners are emotional beings so if they do not like or they are not interested in the learning situations they do not learn.

Anaphora

A term used in grammatical description for the process or result of a linguistic unit deriving its interpretation from some previously expressed unit or meaning. More specifically, they are words which look back in the text for their interpretation. In fact, anaphora is one way of marking the identity between what is being expressed and what that has already been expressed. Anaphoric words refer backwards (O'Grady, 2013).

Example 7: Ali painted this picture in Tehran. In fact, he did that there.

According to Williams (1985), anaphors are sentence-internal antecedents. That is, they must have an antecedent in the sentence. Regarding this feature, anaphors have the following properties:

First, they cannot be used in a nominative position (Guasti, 2002).

*Example 8: *Herself arrived.*

Second, the antecedents must have compatible feature with their anaphors (O'Grady, 2013).

*Example 9: *Reza liked herself.*

Third, the antecedent of anaphor must c-command (constitute-command) the anaphor. That is, the antecedent determines which types of anaphors can be used in the sentence (Sorace & Filiaci, 2006).

*Example 10: *Alex's mother likes himself.*

Fourth, the antecedent and its anaphor must have been used close each other. That is, they cannot be used too long each other (Sorace & Filiaci, 2006).

*Example 11: *Reza thinks that Mina's mother likes himself.*

Binding theory

Binding theory deals with the distribution of different categories of noun phrase, pronouns and anaphors in a sentence. In fact, one of the topics in traditional grammar was how pronouns are related to their antecedents (Chomsky, 1981). Consider the following sentence:

Example 12: Mina hurt herself.

In the above sentence, the reflexive "herself" picks up its reference from the subject of the sentence which is Mina. In this regard, "Mina" and "herself" are co-indexation as they have the same referent.

Binding theory is basically focused on how pronouns and other types of noun relate to each other. Chomsky (1988, p.52) believed that binding theory is concerned with such semantic properties as dependence of reference, including the connection between a pronoun and its antecedent. In addition, the reflexive and its antecedent must agree with respect to the nominal features of person, gender and number. That is, lack of agreement leads to ungrammatically (Chomsky, 1986). In this regard, the following sentence is considered as an ungrammatical one:

*Example 13: *Mina hurt himself.*

Anaphors such as herself and himself always have antecedents in the sentence rather than outside it. That is, reflexive and antecedent must be found in some local domain. The following example makes it more clearly:

Example 14: Reza said that Mina hurt herself.

Binding theory is formulated upon three principles, principles 1 deals with referring expressions, principle 2 applies to pronominal, and principle 3 applies to anaphors (Chomsky, 1986).

Referring expression and Binding Principle A

Nouns are classes as referring expressions in that their reference is necessarily to something in the real world outside the sentence rather than to some other elements in the sentence. In fact, a referring expression must be free or unbounded everywhere (Chomsky, 1988). Consider the following example:

Example 15: George Bush

Pronouns and Binding Principle B

Generally, pronouns belong to the class of pronominal. As it was stated before, pronominal do not have antecedents within the same sentence. In this regard, pronouns must be free or unbounded in their local domain or governing category (Chomsky, 1988).

Example 16: Reza Monadi shot her.

Anaphors and Binding Principle C

Generally, anaphors are dependent nominal elements which must have antecedent in the sentence. Anaphors, in English language, include reflexives (herself, himself, themselves, myself, ourselves, yourself) and reciprocals such as each other (Chomsky, 1988).

Example 17: Mina shot herself.

In the above example, “*Mina*” and “*herself*” are the same entity. That is, the anaphor “*herself*” refers back to the noun “*Mina*”. In other words, the anaphor “*herself*” bounded to the noun “*Mina*”.

Thus, anaphors always have antecedents in the sentence rather than outside it. That is to say, they are sentence-internal antecedent. Hence, the Binding principle C states that an anaphor is bounded in a local domain or in its governing category.

Previous studies on the acquisition of anaphors

“The study of second language acquisition within formal linguistics has long been based on the assumption that learners acquire a grammar consisting of abstract parameterized principles that apply to intricate tree-like syntactic representations” (Grady, 2013, p. 1). In this regard, many studies have been done on the acquisition of different parameters of syntax, especially Binding theory and acquisition of pronouns in recent years.

Hendriks, Spenader and Smits (2007) have studied the comprehension and production of pronouns and reflexives of Dutch children. Regarding the standard Binding Theory (Chomsky, 1981), the researchers have hypothesized that principle A plays a constraint role on form and meaning of Dutch pronouns and reflexives while Referential Theory (RT) just has impact on the form of Dutch pronouns and reflexives. They have also argued that in comprehension and production of reflexives and pronouns, adult learners have been affected by bidirectional optimization and children are influenced by unidirectional optimization. In the experimental stage, they have benefited from both classical Chain and Wexler and embedded sentences.

Moreover, the results revealed that Dutch pronouns (69%) were comprehended better than while Dutch reflexives (85%). That is, the comprehension of Dutch reflexives was easier than pronouns. In addition, there was an asymmetry in children’s pronouns and reflexives comprehension and production (unidirectional). More specifically, they had problem in comprehending third person pronoun. Also, embedded sentences made the comprehension of Dutch reflexives harder.

Consistence with the previous study, Li and Zhou (2010) made an attempt to investigate whether the violation of Chomsky’s principle A comes with parsing costs during sentence comprehension. They hypothesized that linking the reflexives with a distance rather than local antecedent does not mean that sentence comprehension requires more parsing (e.g. John knows that Ben believes himself). Although a number of linguistic attempts have been used to refer to the long distance reference function that violates the principle A of Chomsky (1981), in this research, the researchers have applied event-related potential technique (ERP). ERP is a Neuro-linguistic task that asks participants to read the sentences and give their opinion whether the sentence is correct or false. Moreover, there are equal opportunities to refer to long-distance or local antecedent by ERP. Consequently, the accurate rate in the local reference was 88% while the accurate rate in the long-distance antecedent was 96.1%.

In another study, Clackson, Felser and Clahsen (2011) have worked on children parsing of reflexives and pronouns. They recorded the children’s eye-movement and used auditory sentences. Regarding Chomsky’s principle A, children comprehend reflexives in age 3 but in some situations they choose pronoun instead of reflexives due to the violation of principle B (DPBE). Adults, in some cases, use pronouns instead of reflexives in co-referent antecedent for more stress and emphasis (Thornton and Wexler, 1999). Unlike what several studies have reported, for monolingual adults, binding principle A does not act as an initial filter. It interacts with children interpretation of reflexives by discourse-level information from early stages on parsing. In addition, children and adults’ eye-movement records have evidence on structurally inaccessible antecedents which are not immediately filtered out by principle B. Findings also shown that younger children have more difficulties in comprehension and production of reflexives and pronouns.

In another investigation, Smits, Siekman, Spenader and Hendriks (2007) investigated whether the presence and absence of the delay of Principle B effect or DPBE (the delay between correct comprehension of reflexives and pronouns) can be explained from the properties of the grammar. To do so, they referred to unidirectional and bidirectional optimization theory (Hendrik & Spenader, 2005, 2006) and stated that comprehension and production of reflexives and pronouns in children is based on unidirectional grammar while in adult; it is based on bidirectional grammar. The results of the study were in line with those of Fisher (2004) in that the researchers believed that pronouns are preferred to reflexives. Instead, the results were not consistent with Hendrik and Spenader (2005, 2006) as they argued that reflexives are preferred to pronouns. The resulting optimality-theoretic model allows the researcher to generate predictions with respect to presence and absence of DPBE cross-linguistically.

Dillon (2012) has examined the role of online and off-line interference on parsing reflexive anaphors. Online interference is where syntactic-caused acts as a hard constraint on antecedent retrieval. When a sentence is poorly understood, offline interference is used as a strategy, enable the listener/reader to answer the comprehension question. Consequently, off-line comprehension errors did not reflect online retrieval errors for reflexive dependencies.

In recent years, a number of studies have been done on the production and comprehension of reflexives and pronouns as well as ESL learners’ knowledge of Chomsky’ principle A in European countries, but few studies have been conducted on the Persian speaking children and EFL learner’s knowledge of Chomsky’s principle in Iran. Thus, the present study is aimed to fill this gap in the literature.

Method

Participants

This study was conducted between three groups of participants in Takestan, Iran.

The first group consisted of 40 adult intermediate EFL learners, selected by Key English Test, from Puyan Institute. The participants were both male and female learners whose age ranged from 15 to 25. The second group of participants included 40 male and female monolingual Iranian children. The age of the participants, selected randomly from Nazanin Kindergarten, ranged from 2 to 6. The third group included 40 female and male children from Shadoone kindergarten. All the participants were monolingual Iranian children and their ages ranged from 3 to 6.

Although the gender and the age of the participants were not considered in this study, it should be mentioned that in the first group, 25 students were female and 15 students were male. The distribution of the participants is summarized in Table 3.1.

Table 1 Distribution of the participants

	Female	Male
Group 1	25	15
Group 2	16	24
Group 3	22	18
Total	63	57

Instruments

The instruments used in this study were Key English Test (KET) and Grammatical Judgment Tasks. Following is the brief description of each.

Key English Test

A standardized Key English Test was utilized to homogenize the first group of the participants and also determine their language proficiency level (See Appendix A).

This test consisted of 30 items in multiple-choice format. The data from this test were analyzed in order to help the researcher to choose the final sample of the participants.

Grammatical Judgment Tasks

The Grammatical Judgment Task included two separate types; On-line based and Off-line based ones. The Off-line based Grammatical Judgment Task, applied in the first group, was a word appropriate selection task and consisted of 20 statements on selecting appropriate reflexives and pronouns (See Appendix B). Time was a definite factor in answering this task. In this regard, the time allowed for answering the task was 25 minutes.

The obtained data from this task was scored by the researcher through Exact Word Method (EWM) and arranged from zero to 20. Each students score indicated the students' knowledge of reflexives and pronouns. In addition, it was necessary to check the reliability of the selection task before administering it. The reliability of it was estimated using the KR-21 formula and turned out to be 0.78.

The On-line based Grammatical Judgment Task consisted of two separate types: sentence repetition task and picture selection task. The sentence repetition task, just applied in the second group, consists of twenty sentences in Persian. In order to investigate whether Persian speaking children have knowledge of Chomsky's principle A, the researcher read these sentences one by one for children and asked them to give their own views regarding their accuracy.

The picture selection task, applied in the third group, consisted of a set of two pictures. Each series of picture conveyed a specific subject matter and focused on using pronouns and reflexives. The researcher showed these pictures to the students and then asked them to select from a set of pictures the one that best corresponded to it.

Procedure

This research was conducted to test the main hypothesis and see whether Persian speaking children and Iranian EFL learners have knowledge of Chomsky principle A. To do so, the study was conducted in three stages:

In the first stage, 40 intermediate female and male EFL learners were selected randomly from Puyan institute in Takestan, Iran. A standardized Key English Test (KET) including 30 multiple-choice items was given to all the participants in order to homogenize them and determine their proficiency levels. Then, an off-line based Grammatical Judgment Task which was a word appropriate selection task was administered. The results from this task were analyzed in order to see whether Iranian EFL learners have knowledge of Chomsky Principal A.

In the second stage, 40 female and male children were selected randomly from Nazanin Kindergarten in Takestan, Iran with the average age of 4. Then, an on-line based Grammatical Judgment Task (sentence repetition task) consists of twenty Persian sentences was applied. The researcher read each sentence for the children one by one for every participant separately and asked him/her to repeat it. Then, the children were asked to repeat the sentence and their productions were recorded. The

children responses were analyzed in order to see whether Iranian Persian speaking children have knowledge of Chomsky Principal A.

In the third stage, 40 female and male children, selected from Puyan Institute with the average age of 5, were handed picture selection task. That is, the researcher read a sentence and showed two related pictures to children and asked them to select the one which adjusted to the sentence.

Results

Normal distribution of data

Independent samples t-test was used to analyze the data, so it was necessary to make sure of normal distribution of data in advance using Kolmogorov-Smirnov test. With a significant value greater than .05 (alpha >.05), the data is considered normally distributed.

In fact, normal distribution of data means that most of the participants’ scores are close to the average, while relatively few examples tend to one extreme or the other. The results of Kolmogorov-Smirnov statistical procedure are summarized in Table 1.

Table 1 Results of Kolmogorov-Smirnov statistical procedure

	Word selection task	Sentence repetition task	Picture selection task
Test Statistic	0.174	0.154	0.132
Sig. (2-tailed)	0.157	0.01	0.189

According to Table 1, the three groups have a normal distribution. That is, the significant value of each group, i.e. word selection task, sentence repetition task, and picture selection task is greater than 0.05 ($\alpha > 0.05$). Therefore, the data is normally distributed.

Table 2 Word selection task group scores

Score	Frequency	Percent	Valid Percent	Cumulative Percent
14	3	7.0	7.0	7.0
15	3	7.0	7.0	15.0
Valid 16	6	19.0	19.0	35.0
17	6	19.0	19.0	55.0
18	4	13.0	13.0	67.0
19	9	35.0	35.0	99.0
Total	25	100.0	100.0	

As it is obvious in Table 2, the minimum score is 14 with the frequency of three and the maximum score is 19 with the frequency of nine. A bell-shaped distribution of Figure 1 implies the normal distribution of data.

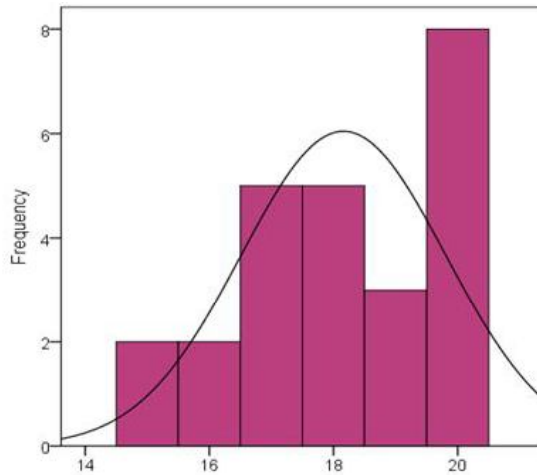


Figure 1 Word selection task group scores

On the other hand, in sentence repetition task, the minimum score was 12 and the maximum score was 20 with the frequency of one for each group.

Table 3 Sentence repetition task group scores

Score	Frequency	Percent	Valid Percent	Cumulative Percent
12	1	4.0	4.0	4.0
13	2	8.0	8.0	12.0
14	3	12.0	12.0	24.0
15	3	12.0	12.0	36.0
Valid 16	5	20.0	20.0	56.0
17	4	16.0	16.0	72.0
18	5	20.0	20.0	92.0
19	1	4.0	4.0	96.0
20	1	4.0	4.0	100.0
Total	25	100.0	100.0	

Moreover, a bell-shaped distribution of Figure 2 indicates that the data is normally distributed.

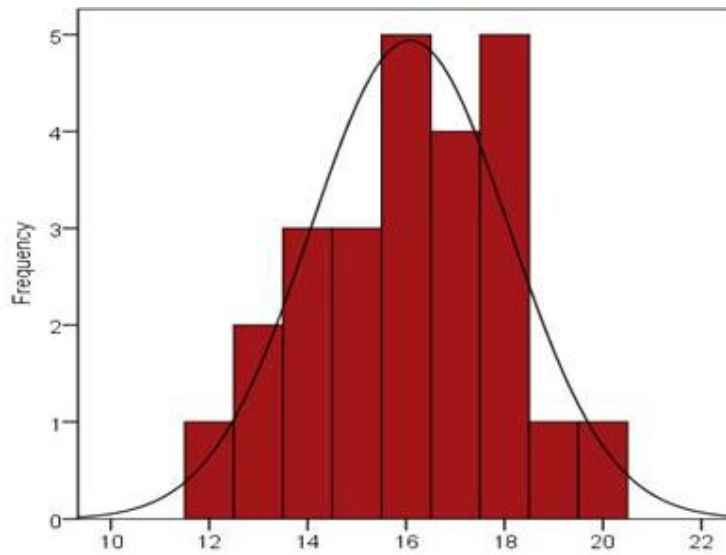


Figure 2 Sentence repetition task group scores

Also, as it is obvious in Table 4, the minimum score of picture selection task score group is 9 with the frequency of one and the maximum score is 20 with the frequency of one.

Table 4. Picture selection task group scores

Score	Frequency	Percent	Valid Percent	Cumulative Percent
11	1	3.0	3.0	3.0
12	5	10.0	10.0	7.0
13	2	7.0	7.0	11.0
14	3	10.0	10.0	22.0
15	1	10.0	10.0	35.0
Valid 16	2	18.0	18.0	64.0
17	1	17.0	17.0	58.0
18	2	10.0	10.0	90.0
19	2	3.0	3.0	65.0
20	1	3.0	3.0	100.0
Total	25	100.0	100.0	

A bell-shaped distribution of Figure 3 implies the normal distribution of data.

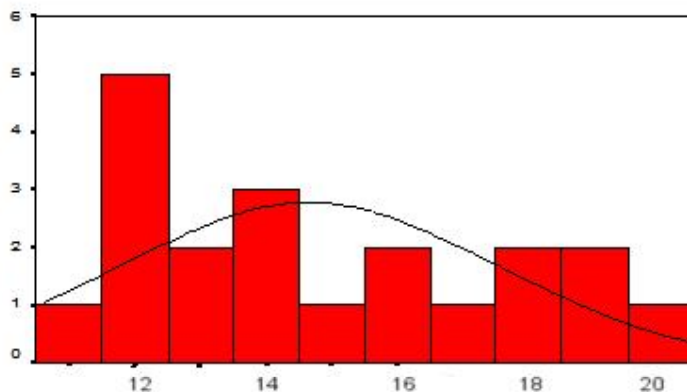


Figure 3 Picture selection task group scores

In the following section, the results of the students’ scores in post-test will be investigated in order to find out if Persian speaking children and Iranian EFL learners have knowledge of Chomsky’ principle A.

Investigation of first research question

In order to answer the first research question of this study, which was the investigation whether Persian speaking children have the knowledge of Chomsky Principle A, the results of the participants ‘scores on sentence repetition task and picture selection task were calculated by independent sample T-Test and the results are presented in Table 5.

Table 5 Descriptive statistic of Persian speaking children

Dependent variable: scores				
Group	Mean	Std. Deviation	Std. Error Mean	N
Group 1	15.40	2.53	0.64	40
Group 2	15.80	1.76	0.58	40
Total	31.20	4.29	1.22	80

As it is seen in the above table, Persian speaking children in the second group, with the average age of five, had higher mean scores and lower standard deviation than the Persian speaking children with the average age of four in the first group. It means that students in the second group with the mean score of 15.80 and Std. Deviation of 1.76 had better performances than those in the first group with the mean of 15.40 and Std. Deviation of 2.53. The following results of independent sample t-test indicate that whether the observed mean differences are statistically significant or not. The results are presented in Table 6.

Table 6. The results of independent samples T-test

	Levene's Test for Equality of Variances	t-test for Equality of Means				
		F	Sig.	T	df	Sig. (2-tailed)
Chomsky knowledge A	Equal variances assumed	1.118	0.00	1.159	35	0.00
	Equal variances not assumed			1.159	32.14	0.00

As it is seen in Table 4.6, the significant value of Chomsky knowledge A is 0.00 ($0.00 < 0.05$). It means that both group had statistically significant Chomsky knowledge A. Based on the above statements, the null hypothesis of this study that suggested Persian speaking children have no knowledge of Chomsky' principle A is rejected.

Investigation of second research question

In order to answer the second research question of this study, which was the investigation whether Iranian EFL learners have the knowledge of Chomsky Principle A, the results of the participants 'scores on word selection task were calculated. The results are presented in Table 7.

Table 7 Descriptive Statistics of EFL learners

Group	Mean	Std. Deviation	Std. Error Mean	N
Pre-test	16.84	1.52	0.52	40
Post-test	17.10	1.34	0.44	40
Total	31.20	2.86	0.96	80

The results of the above table indicate that EFL learners got higher mean scores and lower standard deviation in post-test than in the pre-test. It means that EFL learners in the post-test with the mean score of 17.10 and Std. Deviation of 1.34 had better performances than in the pre-test with the mean of 16.84 and Std. Deviation of 1.52. In order to see whether the observed mean difference were significant, the results of independent sample t-test are presented in Table 8.

Table 6. The results of independent samples T-test

			Levene's Test for Equality of Variances		t-test for Equality of Means		
			F	Sig.	T	df	Sig. (2-tailed)
Chomsky knowledge A	Equal variances assumed		2.0127	0.00	2.815	27	0.00
	Equal variances not assumed				2.815	27	0.00

The results of above table show that the significant value of EFL learners scores is 0.00 (0.00<0.05). It means that EFL learners had statistically significant Chomsky knowledge A. Based on the above statements, the null hypothesis of this study that suggested Iranian EFL learners have no knowledge of Chomsky' principle A is rejected.

Discussion

The results of the present study indicated that Persian speaking children had knowledge of Chomsky 'principle A. As it is stated in the previous section, Persian speaking children with the average age of five had higher mean scores (15.80) and lower standard deviation (1.76) than Persian speaking children with the average age of four (M: 15.40, SD: 2.53).In addition, the significant value of 0.000 shows that the Persian speaking children scores have positive relation to knowledge A of Chomsky.

Based on this statement, the first null hypothesis of this study suggested Persian speaking children have no knowledge of Chomsky' principle A is rejected. This result is in line with those of Clackson, Felser and Clahsen (2011), Smits, Siekman, Spenader and Hendriks (2007), and Fisher (2004) who believed that comprehension precedes the production. Thus, the results of the present study are associated with the Chomsky knowledge A.

The result of present study are not in accordance with those of Bates, Dale and Thal (1995), Benedict (1979), Clark (1993), Fraser, Bellugiand Brown (1963), Goldin-Meadow, Seligman andGelman (1976), Layton and Stick (1979) who believed that children cannot select the correct form (production) while they do not comprehend correctly.

In addition, regarding the comparison between the EFL learners' word selection task scores in pre and post-test, the mean differences showed that there is a significant difference between the performances of the students in both tests. It means that the EFL learners in post-test had better performances than those in pre-test. That is to say, the EFL learners in post-test (M = 17.10 and SD. = 1.34) had reached to the higher performance than in pre-test (M = 16.84 and SD. = 1.52).

Based on the above result, the second null hypothesis of this study suggested Iranian EFL learners have no knowledge of Chomsky' principle A was rejected. The above result is in accordance with a number of previous studies (Dillon, 2012; Hendriks, Spenader& Smits, 2007; Li & Zhou, 2010) who believed that EFL learners had the knowledge A of Chomsky.

Implications

This study, like other studies, has some implications for different individuals including EFL learners, EFL teachers as well as syllabus designers and researchers. Learning the linguistic of a foreign/second language is a complex process because learners should integrate prior knowledge to the new learnt ones. In this regard, teachers can play a significant role in helping children to acquire some aspects of a language. That is, learning different structures of a language can be facilitated if teachers try to motivate learners to improve their background knowledge. To do so, they can utilize useful examples so that students internalize the procedures of different aspects of a language. However, teachers should consider all the factors and even knowledge which can affect second/foreign language acquisition.

Moreover, the findings of this study may have important implications for syllabus designers and researchers. Syllabus designers can allocate more space in their course books to the activities that needs learners to use different types of Chomsky's principles.

Moreover, researchers can also conduct more studies on the acquisition of anaphora and different types of pronouns so that learners, teachers, syllabus designers, and materials developers understand which types of Chomsky's principles is need to acquire pronouns. Besides, the results of this study can open the new door for researchers to help them examine other dimensions of this research.

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