

An Investigation of the Learnability of Relative Clauses by EFL Learners

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Abstract

Relative clauses as complex syntactic structures in human languages have attracted the attention of a lot of second language acquisition researchers. They are difficult for learners to produce, comprehend and imitate. The present study was an attempt to investigate the learnability of the English relative clauses by Persian learners. After discussing the importance of relative clauses, the role it plays in language acquisition, the hypotheses were proposed and investigated. The findings show that the acquisition or frequency rank order of four types of relative clauses was OS > OO > SS > SO, and that OS and OO relative clause types would be easier to acquire than SS and SO types.

Keywords: *Relative clause, Restrictive/nonrestrictive relative clauses, Relative pronoun*

1. Introduction

Relative clause (RC), as one of the most familiar types of subordinate clause, has attracted the attention of second language acquisition researchers and educators due to its complex structures (Gass&Selinker, 2001), and the apparent difficulty to language learners. Moreover, RC which is considered as a universal linguistic phenomenon has been a very important issue of linguistic studies for its unique syntactic structure, frequent usefulness and grammatical importance. RCs are a kind of complex syntactic structures in human languages. They are difficult for learners to produce, comprehend and imitate. The complexity of these structures is related to their intrinsic nature of subordination which is “a basic, universal linguistic process” (Sheldon, 1974, as cited in Sadighi, 1994). Due to subordination, the relations held between NPs and VPs incorporated in RCs are complex.

Relativization in English is a sentence structure where one sentence is embedded in another sentence when these two sentences share a co-referential noun or noun phrase. An English relative clause is a dependent clause and acts as an adjective. In other words, it modifies a noun or noun phrase in the main clause by making it more specific or giving additional information about a person, idea, or thing. A relative clause should always be located right after the noun which it modifies. An English relative clause can be categorized as restrictive or nonrestrictive depending upon the necessity of information it provides (Lock, 1996). A restrictive relative clause provides essential information to define or clarify the noun or noun phrase it modifies, whereas a nonrestrictive clause provides unnecessary, but possibly interesting information. The examples of the two types of relative clauses are as follows:

- (a) Restrictive clause: The lady who lives next door is a famous writer.
- (b) Nonrestrictive clause: Ms. Smith, who lives next door, is a famous writer.

In the first example, the relative clause ‘who lives next door’ is used to make the lady more specific and eventually changes the meaning of the sentence. Without this information, the meaning of the sentence, ‘the lady is a famous writer’, would not be the same or clear to the listener or reader. On the contrary, the second sentence does not need the information presented in the relative clauses because ‘Ms. Smith’ itself conveys enough information about the person and the listener or reader does not need the information in the relative clause, ‘who lives next door’

to identify the subject of the sentence. The present study used only the restrictive relative clauses because they are more common than the other type (Izumi, 2000).

A relative clause typically begins with a relative pronoun such as 'who', 'whom', 'which', 'that', and 'whose'. Of them, 'who', 'which' and 'that' are most commonly used pronouns. The selection of a pronoun depends on the noun which the relative clause refers to and what type of relative clauses is used. A relative pronoun can have different functions in a sentence (e.g., subject, direct or indirect objects, object of a preposition).

RCs provide a good source for investigating the underlying rules, strategies, and processes that language learners use to process complex sentences. Such an investigation will also provide good insight into the order of acquisition of the positions and point to universal linguistic principles of the ease and difficulty of acquisition. Moreover, it can inform curriculum design, teaching methodology, and evaluation.

The teaching of relative clauses takes place in grade two in junior high school (guidance school) in Iran. Topics covering relative clauses may appear again and again in different textbooks especially pre-university level textbooks. One reason relative clause interests English teachers like me is that it can be used and manipulated in a number of ways, like a lot of multiple choice, sentence transformation or re-expression exercises related to relative clause structures can be assigned to the students. And later in the term, at the end of term or at university entrance exam (Konkor) the students can be tested to see if they have mastered the use of different types of RCs in addition to any other grammatical structures they have been taught. With respect to the significance of RCs in the teaching and learning of EFL in Iran, and the fact that few studies have so far been done on Iranian subjects, I have done this study hoping that the findings could help English teachers who deal with this structure in EFL classrooms in Iran.

The main purpose was to test the hypotheses of three language researchers – Kuno (1975), Keenan (1975), and Sheldon (1974) – regarding the sequence of acquisition of four types of relative clauses in English – OS, OO, SS, SO. Kuno and Keenan hypothesized two slightly different orders compared with the one hypothesized by Sheldon, probably because the latter based her hypothesis on children aged 3 to 5, whereas the other two researchers based their hypotheses on older learners and professional English writers (as cited in Wong, 1991). The present study intends to determine whether among four types of RCs produced by Iranian EFL learners of English, there is an order of difficulty or accessibility, and whether that order, if there is one, coincides with that hypothesized by any of the language researchers mentioned above. In this way, the study investigates the question of acquisition of RCs.

Figure 1: The four types of relative clauses

OS The head noun is the object of the main clause and the relative pronoun is the subject of the relative clause

Example: I know the student who got an A.

OO The head noun is the object of the main clause and the relative pronoun is the object of the relative clause.

Example: I know the woman who(m) you are looking for.

SS The head noun is the subject of the main clause and the relative pronoun is the subject of the relative clause.

Example: The student who got an A is a friend of mine.

SO The head noun is the subject of the main clause and the relative pronoun is the object of the relative clause.

Example: the student whom you have talked to got an A.

In an attempt to define a potential natural sequencing for RCs, the three linguistic hypotheses on language universals will be presented.

Perceptual Difficulty

Kuno (1975) argued that sentences with center embedding are perceptually more difficult to process than sentences with right branching RCs. He therefore argued that OS and OO types should be easier than SS and SO.

Relativized Subject Accessibility

Keenan (1975) claimed that relativized subjects are more accessible than relativized objects, and he therefore argued that SS and OS types should be easier than SO and OO types.

Parallel Function

Sheldon (1974) hypothesized that the parallel function hypothesis, which maintains that RCs have the same functions as the head noun. Thus, she claimed that SS and OO should be easier than SO and OS types.

Role of L1

Although Persian is a verb final language, it has certain head-initial constructions such as Noun-Possessor, Noun-Adjective and Noun-Relative Clause constructions. Relative clauses in Persian, as in English, are head-modifying constituents in the sense that they modify the NP they follow (Taghvaipour, 2005).

Persian RCs are unbounded dependency constructions containing gaps or resumptive pronouns, licensed by a higher structure in which the RC modifies a NP. In some positions only gaps are allowed and in some position only resumptive pronouns. There are also some positions where both gaps and resumptive pronouns are allowed. Additionally, all Persian RCs contain the invariant complementizer 'ke'.

Persian is one of the languages in which there is a formal distinction between restrictive and non-restrictive RCs (Comrie, 1983). These two types of RCs are distinguished semantically. Restrictive RCs use presupposed information to identify the referent of a noun phrase, while the non-restrictive relative is a way of presenting new information on the basis of the assumption that the referent can already be identified.

Restrictive RC: *Danešju-i [ke be širazræfteh bud], bərayæmnameh-inevešt.*

Student-RES COMP to Shiraz go-PP-3sg, for me letter-IND wrote-3s
'The student who had gone to Shiraz wrote me a letter.'

Non-restrictive RC: *Ali, [ke be širazræfteh bud], bərayæmnameh-inevešt.*

Ali COMP to Shiraz go-PP-3sg for me letter-IND write-PAST-3sg
'Ali, who had gone to Shiraz, wrote me a letter.'

[Safavi (1994: 2)]

There are two main features by which restrictive RCs are formally distinguished from the non-restrictive ones in Persian: (1) 'comma intonation', i.e., the obligatory pause the noun modified by a non-restrictive RC, and (2) the suffix *-ion* the noun modified by a restrictive RC.

The Persian relative construction is different from its English counterpart in three ways (Karimi, 2001). First, there is a relative particle *-i* attached to the head noun in Persian, as in (a). English lacks this particle.

(a) *Ketab-ikemænxær-id-æm*

book-REL that I buy-PAST-1SG

'The book that I bought'.

Second, there is no relative pronoun in Persian. In fact, Persian relative clauses are more similar to English [*that* CP] constructions like (b), the English translation of (a): in Persian, the relative clause is always introduced by the invariant relative complementizer *ke*.

(b) The book that I bought.

Finally, Persian allows either a gap or a clitic pronoun, representing the missing head noun, within the CP. This difference, crucial for my analysis, is discussed in the following section.

In English, relative pronoun is variant, which always precedes relative clause and follows the head noun phrase, in contrast, Persian relative marker 'ke' is invariant and follows the head noun (Karimi, 2001; Taghvaipour, 2005), as the following example (1) shows.

(1) a. I know the girl [*who speaks Persian*].

(head noun) (relative pronoun)

b. mænmishnasæmdokhtæri^{ke}sohbætmi^{kone} Farsi.

(head noun) (relative marker)

English relative pronoun is characterized by Paris (1976) as morphemes which stand for nouns and vary morphologically in accordance with the function of the noun which is relativized in the relative clause. When a relative pronoun is in the objective case, it can optionally be deleted. English relative pronoun also the connective function and it also serves the function of narrowing down the possible role that the relativized noun phrase plays in the relative clause (as cited by Zhang et al., 2008). However, Persian relative clause do not contain relative pronoun, but use an invariant relative marker 'ke'. In addition, the use of relative marker is obligatory (Karimi, 2001; Taghvaipour, 2005), not optional as English relative clauses are, as example shows:

(2) dokhtærikemæn dost daræm.

girl^{ke} I like.

The girl that I like.

Previous Studies

Ioup and Kruse (1977) used grammaticality judgments of sentences containing RCs with 87 Chinese, Japanese, Arabic, Persian, and Spanish speaking subjects. Based on number of total errors, acquisition of sentence type was in the following order: OS > OO > SO > SS. This confirms Kuno's hypothesis of avoidance of embedding, but not Keenan & Comrie's NPAH.

Schumann (1980) analyzed the RCs produced by five subjects (Spanish and Italian) in three different studies to determine the sequence of RC acquisition. The frequency of production was OS > OO > SS > SO. This observation confirms the conclusions of Ioup and Kruse (1977) and Kuno (1974).

Using the strategy of sentence combining, Ioup (1983) tested 166 adult speakers of Egyptian Arabic on nine categories of subordination. Ioup counted total errors and found that relatives formed on object heads (OO and OS) had more errors than those formed on subject heads (SS and SO). She reasons that the latter may be harder to process, but the former are more prone to errors. For instance, subjects joined sentences by coordination rather than subordination when the RC occurred at the end of the clause. This study contradicts the former Ioup and Kruse's study (1977), which may be due to the type of test instrument and the fact that coordination is more common in Arabic than subordination due to the aural form of writing that predominates in Arabic texts.

Wong (1991) collected 170 English compositions by four Form 5 classes in a Hong Kong secondary school and tried to find out whether there was a natural sequence of acquisition or hierarchy of difficulty of the various relative clause types in ESL learners' writing in the Hong Kong context. First, he established that a simple frequency count of attempts to use a certain type of relative clause implied that this type was more easily accessible than other types not chosen for use as frequently. Then, he made pre- and post-error-frequency counts of students' production of six types of relative clauses and found out that both the pre- and post-error-analysis data lent strong support to Kuno's PDH. The frequency of production or the acquisition sequence of relative clauses by the group of Hong Kong ESL learners was OS > OO > SS > SO.

Sadighi (1994) investigated the comprehension of RCs by 56 Chinese, Japanese, and Korean adults learning English in the United States whose native language feature pre-nominal RCs, and compared these results with his two earlier studies with Persian speakers, whose native language features postnominal RCs. His purpose was to discover whether acquisition is related to universal grammar principles or to the way RCs are formed in one's mother tongue. It was found that subject RCs formed on objects in the matrix clause (OS) resulted in the fewest errors for speakers of all four languages; and the genitive (after S and O antecedents) and object of comparison were the most difficult. He concludes that adult L2 learners like L1 learners have access to linguistic universals during the course of language acquisition and that native language does not play a part in acquisition. His findings also support the view that Interruption (central-embedding) and Word Order Re-arrangement (relative clauses not in SVO order) contribute to the perceptual difficulty of RCs. Subject RCs formed on objects (OS) result in fewer errors since they do not involve Interruption or Word Order Re-arrangement like OO and SO do.

2. Research Questions

The questions raised and looked for in the present study are as follows:

- 1) To what extent are the predictions of different hypotheses of RC acquisition – Perceptual Difficulty, Relativized Subject Accessibility, or Parallel Function – supported by the results of Sentence Combining Test performed by Iranian EFL learners of English?
- 2) What is the rank order of mastery over the four types of English relative clauses, OS, OO, SS, and SO, in Iranian EFL learners?
- 3) Do Iranian learners of English transfer the use of Persian RCs into English when performing the Sentence Combining Test?

3. Method

3.1 Participants

The participants of this study were fourth semester students majoring in English (Translation) at the University of Applied Science and Technology (ElmiKarbordi) in Sari, Iran in 2012. Through administering the NELSON English Language tests, series 300B, to 92 students, 78 students were chosen for the purpose of this study. Therefore, they were considered the high intermediate group. The students' first language was Persian. They learned EFL as a mandatory course since their junior high school (guidance school) period at the age of twelve. Thus, in general they had studied English for over ten years. Participants' ages ranged from 21 to 26 years old and on the basis of demography test they were kept similar in terms of linguistic background, socio-economic status, motivation, attitude and educational (previous exposure to English language) orientation. In order to control the participants' gender as a moderator variable, the present researcher invited both genders into this study.

3.2 Instruments

A) Language Proficiency Test

In order to make sure of the homogeneity of the group in terms of English language proficiency, a test of NELSON, series 300B, after being piloted on a similar group of ten students, was administered. It consisted of four parts: Cloze tests, structure, vocabulary, and pronunciation and the time allotted for the test was 35 minutes.

B) Gardner's Questionnaire (1985)

To ensure the homogeneity of the learners in terms of motivation, a questionnaire developed by Gardner (1985) was also administered. The instrument included a 1 to 5 scale for each item showing the extent it corresponded to the learners' reasons for learning English. Scale 1 means that the item does not refer to the learners' reasons at all. Scales 2 indicate that the reason represented by the items is a little true about the learners. The learners who mark scale 3 show that the item moderately represents their reason for studying English. Scales 4 with a little difference in degree represent that the item corresponds a lot to the students' reason for learning English. Scales 5 shows that the learner has exactly the same reason mentioned in the item for learning English.

C) Sentence Combination Test

To test the students' planned, written sentence-level production about the target structure, sentence combining tests (SCT) producing sentences containing the target structure (Ellis, 2002) and adopted by Izumi (2001) were conducted with four types of relative clauses, SS, SO, OS, and OO. Sentence combination is a typical type of elicitation which researchers use in eliciting relative clauses. Quite a number of previous studies adopted this to collect data concerning relative clauses (Flanigan, 1995; Gass, 1979; Izumi, 2003; Eckman, Bell, & Nelson, 1988; Hamilton, 1994). Therefore, as written sentence-level production test, sentence combining test was designed for this study. 20 sets of two sentences which could be combined into one sentence by using one of the four basic types of relative clauses related to each type of relative clause were administered. The distribution of each type of relative clause is at random. The time allotted for this test was 25 minutes.

3.3 Procedure

To accomplish the purpose of the study, through administering NELSON English language test, series 300B, over the first session a homogeneous group was identified. Then in order to have homogenous learners in terms of motivation, the investigator administered Gardner's questionnaire (1985) to the learners over the second session (next day). Next, the investigator administered the learners the Sentence Combining Test over the second session (next day). It is to be noted that in this study both male and female students participated. All of them were Iranian EFL Learners studying at the University of Applied Science and Technology (ElmiKarbordi) in Sari during the

spring semester, 2012. The administration of the three tests (proficiency test, Gardner's questionnaire and SCT) took 60 minutes, which were completed in two separate days.

4. Results

To investigate the rank order of mastery over four types of relative clauses, SS, SO, OS, and OO, the raw scores and percentages of the SCT were calculated and presented according to four relative clause types.

As shown in Table 1, the order of mastery over four types of relative clauses in the test was OS (75.4%) > SS (74.6%) > OO (72.3%) > SO (66.9%) and that the easiest type for mastery in the target group was OS relative clause type, while the most difficult type for mastery in the was SO relative clause type.

Table 1: Correct Numbers and Percentages of Four Types of Relative Clauses for the target group

Relative clauses	Raw Scores (N = 1560)			
	OS (n=390)	OO (n=390)	SS (n=390)	SO (n=390)
Mean	(294)	(282)	(291)	(261)
(%)	75.4%	72.3%	74.6%	66.9%

Note: (n=the total number of test items)

Raw Scores: (N = 1560) = OS (n = 390) + OO (n = 390) + SS (n = 390) + SO (n = 390).

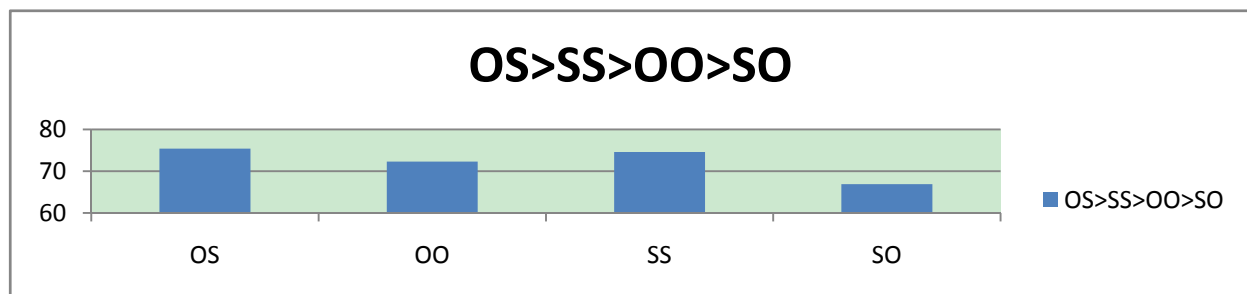


Figure 2: Correct Percentages of Four Types of Relative Clauses for the target group

5. Discussion

As shown above, the data were analyzed with the frequency count of different RCs and were put into their different categories. Now, they will be checked against the three RC accessibility/acquisition hypotheses to be tested, producing the following results:

Kuno (1975) argued that center embedding is perceptually difficult and therefore OS and OO types should be easier than SS and SO. From the data, OS + OO = 294 + 282 = 576, while SS + SO = 552. Thus, the data tend to support the Kuno's hypothesis.

Keenan (1975) claimed that relativized subjects are more accessible than relativized objects, and therefore SS and OS types should be easier than SO and OO types. From the data, SS + OS = 585, while SO + OO = 543. Therefore, the data also seem to support Keenan's hypothesis.

Sheldon (1974) proposed the parallel function hypothesis, which maintains that RCs easiest to acquire are those in which the relative pronoun has the same function as the head noun. Thus, SS and OO types should be easier than SO and OS types. Regarding the data, SS + OO = 291 + 282 = 573, while SO + OS = 555. Thus, the data seem to support Sheldon's hypothesis.

In sum, the data tend to support all three hypotheses proposed by the three researchers. However, looking at the four types independently, we can see that the four type totals seem to support Keenan's hypothesis. This is because both Kuno and Keenan hypothesized that OS was one of the easier types, only Keenan claimed that SS was also an

easier type. Keenan's position is supported by the present data, which shows that SS is second in the sequence, while Kuno argued that OO was the other of the easier type besides OS. Kuno's position is therefore not supported by the data.

This rank order of frequencies (OS>SS>OO>SO) as given in Table 1 contradict with the one in previous studies by Stauble in 1978 (as cited in Celce-Murcia and Larsen-Freeman, 1983, p. 366) who studied the frequency of the same four types of RCs in samples of native speaker speech and writing, and Schumann (1980) who studied the frequency of production of these four types of relative clauses by a variety of ESL learners and also Wong who studied learnability of RCs by ESL learners on Hong Kong.

The present study was undertaken to investigate the order of mastery of the four types of English relative clauses and also the rank order of mastery over the four types of common errors of relative clauses in English. To achieve these goals, research questions were formed and in order to find the answers, two tests of SCT and GJT were administered.

Regarding the Research Question 1, "To what extent are the predictions of different hypotheses of RC acquisition – Perceptual Difficulty, Relativized Subject Accessibility, or Parallel Function – supported by the results of Sentence Combining Test performed by Iranian EFL learners of English?", the findings displayed that the four type totals seem to support Keenan's hypothesis. This is because both Kuno and Keenan hypothesized that OS was one of the easier types, only Keenan claimed that SS was also an easier type. Keenan's position is supported by the present data showing that SS is second in the sequence, while Kuno argued that OO was the other of the easier type besides OS. Kuno's position is therefore not supported by the data.

Regarding the Research Question 2, "What is the rank order of mastery of the four types of relative clauses, SS, SO, OS, and OO, in Iranian EFL learners?", the group showed that the rank order for mastery was OS (80%) > OO (52.5%) > SS (20%) > SO (2.5%). Therefore, the findings obtained from this current study are consistent with the results of a number of previous researchers (Ioup & Kruse, 1977; Kuno, 1974; Stauble, 1978; Wong, 1991, as cited in Celce-Murcia & Larsen-Freeman, 1999) that the acquisition or frequency rank order of four types of relative clauses was OS > OO > SS > SO, and that OS and OO relative clause types would be easier to acquire than SS and SO types.

Regarding the Research Question 3, "Do Iranian learners of English transfer the use of Persian RCs into English when performing the Sentence Combining Test?", we can say L1 could impede or facilitate L2 acquisition for the judgment of the four types of common errors of RC. Although the two error types – pronoun retention and incorrect relative-marker morphology – could be more from L1 negative transfer, for the Iranian students they do not have more cognitive constraints than the other two error types – non-adjacency and inappropriate relative-marker omission. Further, it seems that morphologically simple error types such as pronoun retention and incorrect relative-marker morphology can enhance more students' input than structurally and functionally difficult error types such as non-adjacency and inappropriate relative-marker omission. Moreover, the rank order of mastery over the four common error types of RCs are consistent with that of frequency suggested by Gass (1982) and Izumi (2001), in which error type of pronoun retention showed the least error frequency, while error type of non-adjacency displayed the most error frequency.

6. Conclusion

The findings of the study can enrich the literature of learners' acquisition of English relative clauses, which will ultimately benefit the teaching of English relative clauses in Iran as well as some other EFL contexts. Textbook compilers can compile textbooks reasonably according to Persian learners' processing difficulty. The students at different levels reflect the differences in the processing and acquisition of relative clauses, which can help English course teachers to design various classroom activities to reveal students' weak points in the acquisition process, so that they can select proper teaching materials and methods to help students proceed smoothly in the process of language maturity.

Further, the findings can provide Iranian EFL teachers, especially high school teachers and learners with important theoretical and pedagogical implications for the teaching and learning of all four types of relative clauses in terms of presenting the rank order of mastery over four types of relative clauses to Iranian EFL learners. Such an investigation will also provide good insight into the order of acquisition of the positions and point to universal linguistic principles of the ease and difficulty of acquisition. It can also inform curriculum design, teaching methodology, and evaluation.

Moreover, the finding of the study matches Sadighi's findings which supported the view that Interruption

(central-embedding) and Word Order Re-arrangement (relative clauses not in SVO order) contribute to the perceptual difficulty of RCs. Subject RCs formed on objects (OS) result in fewer errors since they do not involve Interruption or Word Order Re-arrangement like OO and SO do.

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