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On the Teachability of L2 Uninterpretable Features: Instructing Resumptive Pronouns through Contrastive Analysis vs. Dictogloss Techniques

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Abstract

Although uninterpretable features are claimed to be an area of difficulty for EFL learners, they are still one of the less explored areas of research in the field of L2 pedagogy. The present study sought to investigate the impacts of two techniques, namely contrastive analysis and dictogloss on EFL learners' mastery of resumptive

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pronouns, an uninterpretable feature absent in English relative clauses but present in most Persian ones. To this end, 77 elementary EFL learners with similar background in English were selected and assigned to three groups: one control and two experimental. Before and after the instruction the participants were administered a 50-item Grammaticality Judgment test and a 20-item translation test which had been developed and validated for use in this study. The results showed that all three groups had significant progression after the treatments, but the comparison among the groups indicated no statistically significant difference. This may suggest that L2 exposure had a more important role in the participants' performance than the instruction type (contrastive analysis and dictogloss). The findings seem to support the importance of exposure to such L2 structures over time and that instruction cannot always accelerate acquisition.

Key words: Dictogloss procedure; Contrastive analysis; Resumptive pronouns; Un/interpretable feature

Introduction

Thornbury (1997) is not alone in considering grammar as the essential, inescapable component of language learning. While many practitioners nowadays agree that grammar instruction is a must in any language class (Celce-Murcia, 1991; Ellis, 2006; Long, 1988; Norris & Ortega, 2000), debate over what constitutes effective and lasting instruction is still going on (DeKeyser, 1998; Doughty, 2001; VanPatten & Oikennon, 1996; Yuan & Ellis, 2003). More recently, a growing number of researchers have come to a consensus that no learning takes place if learners do not attend consciously to specific forms of language (Izumi, 2002; McGinnis, 2007; Schmidt, 2001). This has given rise to the popularity of 'focus on form' instruction (Doughty, 2001; Ellis, 2005; Long, 2000) which is defined as drawing students' attention to linguistic elements in context, as they arise incidentally in lessons whose overriding focus is on meaning or communication. According to Nassaji (1999), focus on form can be achieved either through process in context of natural meaningful communication or through design by designing tasks with a deliberate explicit focus. Since natural communication is not a feature of EFL contexts, Nassaji and Fotos (2004) argue for giving learners the chance to participate in meaningful activities based on exposure to grammatical structures through formal grammar instruction. That way, they believe, optimal learning take place. Noonan (2004) while agreeing with the second option provided by Nassaji

(1999), lists several things teachers can do to help learners notice target structures, among them explicit instruction and developing appropriate tasks. Like focusing on learners' awareness of target language forms, noticing and consciousness raising activities have gained popularity among practitioners as effective tools.

From among the grammatical points that have received attention on the part of researchers, relative clauses (henceforth RCs) in English have been the subject of numerous studies from acquisition as well as pedagogical perspectives. Although the concept of relative clause or modification is a property of all languages, its variability is noticeable. There are differences as to the presence/absence of relative pronouns (e.g., Japanese does not have relative pronouns), dis/allowing resumptive pronouns (e.g., Chinese allows resumptive pronouns), or 'branching direction' (e.g., English is right-branching while Japanese is left-branching). Persian is similar to English in that it has relative clauses and relative pronouns and it is right branching (Norris, 2000), that is, the RC is usually placed after the noun it describes.

However, the two languages are different with respect to resumptive pronouns (henceforth RPs), pronouns in RCs referring to the antecedents of the RCs. While RPs are considered uninterpretable in both English and Persian, they are realized differently in the two languages. They are uninterpretable at both Logical Form and Phonetic Form levels in English (Tsimpli & Dimitrakopoulo, 2007) but only uninterpretable at LF in Persian (Rezai, 2011). As argued by Tsimpli and Dimitrakopoulo (2007), interpretable features like plural marker in English have semantic contribution and are visible at LF, whereas such uninterpretable features as the inflectional morpheme on third person singular verbs do not have any semantic contribution and are not visible at LF. This un/interpretability status of the features is claimed to have bearings on acquisition problems (Hawkins & Casillas, 2008) in that the acquisition of L2 uninterpretable and not interpretable features are subjected to maturational constraints creating persistent acquisitional problems in the process of SLA. Since English disallows resumptive pronouns but they are used in Persian, the following example will clarify the point further:

1. Mærdi ke pay-æsh shekæste bud ra be bimarestan bord-ænd.
   Man that leg-**his** broken was Obj to hospital took-3plu.
   *They took the man whose **his** leg was broken to the hospital.'
   'They took the man whose leg was broken to the hospital.'

It can be discerned from the above example that translating the Persian sentence into English literally results in an ungrammatical construction. Persian speaking L2 learners of English are exposed to RCs in English at the elementary level during the first year of the program in "*English grammar*" course. In addition, when teaching English RCs in language classes in Persian, RPs are not usually introduced so learners do not have explicit knowledge of them. In other words, they are just taught the correct form and are left unaware of the ungrammaticality of RPs in English. The present study, then, was motivated by a desire to find a more effective technique for teaching RCs that would lead to the eradication of using resumptive pronouns on the part of Persian-speakers in their English productions more efficiently. From among focus on form activities, contrastive analysis and the dictogloss were selected in order to find out if they would lead to more robust learning and if so, which one would be more beneficial.

Review of the literature

When it comes to grammar instruction in the classroom, three approaches originally proposed by Long (1991) are more currently debated than others. From among these three approaches, namely, focus on form, focus on forms, and focus on meaning, the first one is the guide to the present study simply because it is believed to be more practical and useful than others while suffering from fewer problems, if any.

Focus on forms instruction, Long (1998) discusses, tends to be 'rather dry, consisting principally on work on the linguistic items' (p.39). Moreover, it does not attend to learners' communicative needs, results in artificial, restricted, and impoverished language, assumes a long- discredited behaviorist model, ignores learners as the key component of the learning process, and de-motivates learners as it produces many more false beginners than finishers.

While appealing, focusing solely on meaning is also problematic because it is not based on learner needs analysis, de-motivates adult learners, and fosters fossilization of non-salient linguistic forms. Long and Robinson (2001) also argue for the necessity of providing negative evidence of what is ungrammatical in a language. Besides, a focus on meaning is inefficient as they strongly support the idea that comprehensible input is necessary but insufficient.

Focus on form, then, is a learner-centered approach to grammar instruction which ultimately aims to induce noticing, what Schmidt (1993) defines as registering forms in the input so as to store them in memory. So, focus on form is under learner control and arises only when the learner has a communication problem and needs to know the meaning or function of the new form while s/he is attending to the input. The fact that occasional attention to linguistic code features is necessitated by a communicative demand is the advantage of focus on form over the other two options stated above.

As for the linguistic features L2 learners are instructed in, Tsimpli and Dimitrakopoulo (2007) argue that interpretable features are accessible to L2 learners whereas uninterpretable features are difficult to acquire. Further, they claim that the identification and analysis of uninterpretable features create persistent acquisitional problems post-maturationally. Indeed, uninterpretable features are subject to the critical period implying that the L1 parametric features associated with these features resist resetting whereas interpretable features are not subject to the critical period constraints. Resumptive pronouns as an uninterpretable feature are allowed in Persian with some restrictions on their use, but are not allowed in English. More specifically, in Persian RPs are obligatory in possessive and indirect object positions, optional in direct object position, and banned in subject position (Taghvaipour, 2005). Examples are:

2(a).mærd-ikepirahæn-e **u** zærdæst
man-Indef that shirt-EZ **he** yellow is (possessive)
'The man whose shirt is yellow …'
2(b). *mærd-ikepirahæn-ezærdæst
man-Indef that shirt-EZ yellow is
'The man whose shirt is yellow …'
3(a).mærd-ike be **u** puldadim
man-Indef that to **him** money gave-1pl (indirect object)
'the man to whom we gave money'
3(b). *mærd-ike bepuldadim
man-Indef thatto money gave-1pl
'the man to whom we gave money'
4. hushængketab-irakepesar-æm (an ra) xæride-bud dozdid
hushang book-Indef RA that son-my (**it** RA) buy-PP-3Sing stole-3Sing
(direct object)

'Hushang stole the book that my son had bought.'
5(a).mærd-ikepirahæn-o pushid
man-Indef that shirt-RA wore-3Sing (subject)
'The man who wore the shirt…'
5(b). *mærd-ike**u** pirahæn-o pushid
man-Indef that **he** shirt-RA wore-3Sing
'The man who wore the shirt…'

Not many studies have so far been conducted on the acquisition and instruction of RCs by Persian-speaking learners and the ones investigating RPs are still fewer. Rezai (2011) investigated the production of resumptive pronouns in English by a group of intermediate and advanced students using a grammaticality judgment test which detected RP production in subject, object, and object of preposition contexts. He was able to conclude that the intermediate level learners showed variable success in avoiding RPs while there were very few cases of RP use at the advanced level, concluding that such learners are eventually able to overcome the L1 interference in their L2 production. Rezai also provided support for the Interpretability Hypothesis (Tsimpli & Dimitrakopoulo, 2007) based on which uninterpretable features pose learnability problems for L2 learners once they are not activated during L1 acquisition.

Elsewhere, Abdolmanafi and Rahmani (2012) reported on the learnability of the English RCs by Persian learners using the model proposed by Keenan (1975). Keenan presented four types of relative clauses: OS, OO, SS, and SO (the first letter shows the function of the head noun in the main clause and the second, the function of the relative pronoun in the relative clause). To clarify the point further, the following examples are provided:

6. I know the student who got an A. (OS)
7. I know the woman who(m) you are looking for. (OO)
8. The girl who speaks Persian is my cousin. (SS)
9. The man who(m) you met is my teacher. (SO)

The sequence of acquisition Keenan (1975) found showed that these learners acquired the OS type of RC first and the SO type last. In fact, the order of acquisition he reported was OS> OO> SS> SO. The results were in line with most other studies done on learners from other L1 backgrounds (Ioup, 1983; Sadighi,

1994; Wong, 1991). He concluded that interruption and word order re-arrangement contributed 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.

In yet another study, Abdolmanafi (2010) tested the effects of focus on form instruction on the learning of RCs. His is the only piece of research to date to have attended to RCs pedagogically. Using two noticing techniques, consciousness-raising and input enhancing, he studied the performance of two groups of elementary learners on a sentence combining test and a grammaticality judgment test. The results indicated that while both groups significantly improved in their knowledge of RCs as revealed by comparing their pre- and post-test performances, the one that received consciousness-raising instruction outperformed the input enhancement group. So, while supporting higher efficiency of consciousness-raising over input enhancement for grammar instruction, the study generally emphasizes maximizing learners' attentional resources by promoting noticing.

Consistent with the above noticing techniques, and originally developed by Wajnryb (1990), dictogloss is defined as a classroom activity where learners listen to a passage, note down key words, and work together to create a reconstructed version of the text. He, then, valued dictogloss procedure in several respects: its interactive nature stops passive classes and encourages co-operative learning; there is a shift of focus from form only because the procedure needs negotiation of meaning and negotiation of form; and in convincing learners about peer feedback and correction, the socio-cultural content of class is promoted. Also, considering the eight principles suggested by Ellis (2005) for more efficient language pedagogy, dictogloss fits as a useful tool. Among such principles, four are especially noteworthy. Ellis defines efficient instruction as one in which attention is predominantly on meaning, the focus is on form, provides opportunities for output, and provides opportunities for interaction. These are also the basic tenets of task-based language teaching and so, certify dictogloss as a useful task for teaching not only grammar but also language skills. Vasiljevic (2010) reports on the effectiveness of dictogloss for teaching listening comprehension. Jacobs (2003) defines dictogloss as a multiple skills activity which integrates all language skills. Rashtchi (2009), however, reports on the equal effects of using dictogloss or explicit focus on form for teaching English tenses, implying that focus on form, whether implicit or explicit, might be helpful to the same degree.

All in all, while contrastive analysis and the dictogloss are not new concepts in L2 pedagogy, and there are several studies investigating the effects of each on different target language features, their effectiveness in promoting Persian speaking elementary L2 English learners' awareness of the ungrammaticality of RPs in English and in helping them avoid using such structures in their L2 productions have not yet been documented in the related literature. Hence, the current study motivated by a desire to find a pedagogic technique to develop the elementary L2 learners' awareness of the ungrammaticality of RPs in English tries to examine the extent to which those two techniques are effective. Accordingly, the following research question is formulated.

- To what extent does using contrastive analysis yield different results from using dictogloss procedure in terms of their effects on the EFL learners' recognition and production abilities of RCs as concerned with RPs?

Method

Participants

The population addressed in this study was adult Persian speaking undergraduate learners of English as a second language in the Iranian academic context. At the beginning, a hundred and twelve Persian-speaking freshmen, studying at Sheikhbahaee University, agreed to participate in this study. They were both male and female aged between 18 and 23.Twenty one learners were excluded from the study though, since they had not participated in one or more sessions of the data collection.

Moreover, based on the participants' answers to a short questionnaire, which enquired about their backgrounds in English, the researchers decided to exclude 14 participants (out of the remainder 91) who had had extensive exposure to English in childhood. In fact, the participants included in this study were only those having been merely involved in learning English in secondary school for six years, two hours per week, indicating that they enjoyed roughly similar status regarding their English background.

Thus, the final number of the participants was 77, attending their weekly scheduled English grammar classes in three different intact groups. The first group (N= 26) received treatment using the dictogloss technique. The second group

(N=21) was taught based on explicit contrastive explanations and the third group (N= 30) acted as the control group.

Instrumentation

The grammaticality judgment test (GJT)

To assess the participants' sensitivity to the ungrammaticality of RPs in relative clauses in English and to gain insight into the state of the learners' competence before and after the instructional treatment, a 50-item GJT was developed and used in the present study.

The grammatical and ungrammatical sentences which were included in the test measured the participants' knowledge of RPs in four positions: subject RCs, object RCs, object of preposition RCs, and possessive RCs. There were eight items for each category in the GJT: four grammatical and four ungrammatical ones. Additionally, 18 grammatical and ungrammatical sentences testing other aspects of grammar irrelevant to the study were included in the test to distract the participants' attention from the points being tested. The following are examples from the GJ test:

10. The runner whose his shirt was blue won the race. √ * ?
11. Well, this is the car which I had told you about it before. √ * ?

The participants were supposed to judge on the un/grammaticality of the sentences. There were three options for each test item. They were asked to choose "√" if they thought that the sentence was grammatical, "*" if they thought the sentence was ungrammatical, "?" if they were not sure of the un/grammaticality of the sentence. They were also asked to correct the sentences they considered ungrammatical. This way the researchers could make sure that the participants knew what had caused the ungrammaticality. The above examples include resumptive pronouns and are, thus, ungrammatical. The participants were expected to circle "*" and to make corrections.

Regarding the validity of the test, the constructed items were first revised after a week by the researchers and then finalized by another colleague for transparency and intelligibility. As to the reliability of the GJT, Cronbach alpha reliability

estimate was calculated to be 0.81, pointing to an acceptable level of internal consistency.

The translation test (TT)

To elicit production data with respect to the syntactic properties under investigation, a 30-item TT was also developed. It included Persian grammatical sentences to be translated into English. The sentences represented the four types of RC (four items for each category) which were also assessed in the GJT. With the exception of subject RCs, all sentences on this test included RPs. Fourteen distracters were also added to play the same role as that of the ones in GJT. Also, simple vocabulary was used in the sentences in order for the test takers not to have any problems with finding the English equivalents. As to the reliability of the TT, Cronbach alpha reliability estimate was 0.72.

Piloting

Initially, the two tests were piloted on five English learners in order to assess the time required to administer the tests, the quality of the instructions, and the quality of the individual test items before they were administered to the target groups. The results of the pilot study were used to correct few problems in vocabulary and spelling in the GJT and TT, and to revise the instructions to make them clearer. So, all the required modifications and adjustments were made to the developed tests before they were administered to the target participants of the study.

Design

A quasi-experimental method of research was employed for the purposes of this research because there was no randomization involved. Regarding the variables, the participants' performance on the four types of RCs served as the dependent variables and the two teaching procedures implemented were the independent variables.

Procedure

Data collection

After being assigned to the experimental and control groups, all the participants took the two tests in one session and within the determined time limits obtained from the pilot study. They also filled in the questionnaire enquiring about their

language background. Treatment took three sessions during which RCs were taught in the three classes using different techniques described above. During these sessions, the first group was made aware of the ungrammaticality of the RPs in English with examples presented by the teacher and then spent their time reconstructing the passage the teacher had read to them while the second group received plenty of examples on how RPs are realized in Persian and how they are banned in equivalent sentences in English. They were then given sentences to translate into English and also did the exercises in their grammar book. The control group also received instruction on RCs without the slightest mentioning of RPs and went on with their book exercises. A week later, the participants were again tested on the same two tests. This was all done during their regular, weekly-scheduled classes.

Data analysis

The pre- and post-tests were scored by two raters. In both GJT and TT, a score of 'one' was considered for each correct answer and 'zero' for each wrong answer. Therefore, each participant's score range for each feature was zero to four. The inter-rater reliability of scoring was found to be .79 pointing to an acceptable consistency in scoring. To be analyzed, the coded data were submitted to Statistical Packages in Social Sciences (SPSS) software. The mean percentage of each group of participants was calculated. Analysis of variance (ANOVA) was then employed to find out if the differences observed among the three groups were statistically significant. The post-hoc Scheffe test was further used in order to pinpoint where exactly the difference lay among the groups. The paired-samples *t*-test was also employed to see whether the performance of each group before and after the instructions were statistically significant. The results of the data analysis are presented in the following section.

Results

As to the research question raised in this study, the overall picture of the participants' performance on the GJT is reported first and then the performance on the grammatical and ungrammatical test items is presented separately. After that, the results of the data analysis concerning the performance on the TT items are reported and finally, based on the obtained findings, the answer to the research question is formulated.

Regarding the overall performance on the GJT items, Table 1 reports on the descriptive and inferential statistics for the performance on the pre- and post-tests in the three groups of participants.

Table 1
Descriptive and inferential results for the overall performance on the GJT

	Dicto. group	**CA group**	**Control group**	**F**	**df**	**Sig. (2-tailed)**
Pretest	M: 12.38 (38.68%) SD: 5.47	M: 15.19 (47.46%) SD: 4.11	M: 12.10 (37.81%) SD: 4.68	2.88	2	0.06
Posttest	M: 17.00 (53.12%) SD: 6.38	M: 18.86 (58.93%) SD: 6.23	M: 16.53 (51.65%) SD: 5.85	0.93	2	0.39
***T*-test**	t: -4.81 df: 25 Sig. (2-tailed): .00	t: -4.07 df: 20 Sig. (2-tailed): .00	t: 5.73 df: 29 Sig. (2-tailed): .00			

As Table 1 shows, the results of performing two one-way ANOVAs indicated that the differences between the mean performance of the three groups on both the pretest (F: 2.88; *p*: 0.06) and the posttest (F: 0.93; *p*: 0.39) were not statistically significant. In other words, the participants in the three groups were almost at the same level of knowledge about the ungrammaticality of RPs in English both before and after the instructions. Further, running three paired-sample *t*-tests revealed that, compared to their performance on the pretest, all groups had significantly improved on their posttest (Dicto: t: -4.81, $p<.0005$; CA: t: -4.07, $p< .0005$; Control: t: 5.73, $p< .0005$), meaning that more exposure to the L2 and not the type of instruction they received had helped them progress further.

After the analysis of the overall performance on the pre- and post-GJT, statistical analyses were also conducted on performance on the four types of RPs

separately. Table 2 below reports the results of the descriptive and inferential analyses of the participants' performance on the grammatical post-GJT items for each type of RP separately.

Table 2
Descriptive and inferential results for the grammatical items in the post-GJT

	Subject RC	**Object RC**	**Object of prep. RC**	**Possessive RC**	**Total**
Dicto. Group Mean	3.42 (85.5%)	3. 17 (79.25%)	3.38 (84.5%)	2.65 (66.25%)	12.62 (78.87%)
SD	0.90	1.32	1.16	1.38	4.16
CA group Mean	3.52 (88%)	3.48 (87%)	3.43 (85.75%)	2.48 (62%)	12.91 (80.68%)
SD	0.75	0.51	0.97	0.75	2.18
Control group Mean	3.37 (84.25%)	3.50 (87.5%)	3.03 (75.75%)	2.80 (70%)	12.70 (79.37%)
SD	0.85	0.68	0.96	1.12	2.39
ANOVA	F: 0.21 df: 2 Sig.: 0.80	F:7.75 df: 2 Sig.: 0.40	F:1.17 df: 2 Sig.:0.31	F: 0.50 df: 2 Sig.:0.60	F:0.53 df: 2 Sig.:0.58

As evidenced in Table 2, the participants in all three groups performed well on more than 75% (above 3 out of 4) of the items assessing the grammaticality of the absence of RPs in RCs. Also, the most problematic type of RP for them was shown to be RPs in Possessive RC (consistently below 75%). Moreover, regarding differences among the groups' performances on each of the RP types, the one-way ANOVA results revealed that there were no statistically significant differences among the three groups of participants as concerned with the performance on each RP type in English RCs. As for the ungrammatical items in the post-GJT, Table 3 presents the results.

Table 3
Descriptive and inferential results for the ungrammatical items in the post-GJ

	Subject RC	**Object RC**	**Object of prep. RC**	**Possessive RC**	**total**
Dicto. group					
Mean	1.23 (30.75%)	1.19 (29.75%)	1.15 (28.75%)	1.35 (33.75%)	4.92(30.75%)
SD	1.14	1.05	1.28	1.29	3.37
CA group					
Mean	1.86 (46.5%)	1.33 (33.25%)	1.52 (38%)	1.29 (32.25%)	5.96 (37.25%)
SD	1.42	1.59	1.53	1.27	5.14
Control group					
Mean	1.20 (30%)	0.77 (19.25%)	0.93 (23.25%)	0.87(21.75%)	3.90 (24.37%)
SD	1.37	1.27	1.48	1.10	4.38
ANOVA	F: 1.82 df: 2 Sig.: 0.16	F:1.35 df: 2 Sig.: 0.26	F:1.04 df: 2 Sig.: 0.35	F: 1.28 df: 2 Sig.: 0.28	F:1.42 df: 2 Sig.: 0.24

According to Table 3, the control group had the lowest performance (3.90 out of 16) and the CA group had the highest performance (5.96 out of 16). Regarding different types of RPs, the performance of the control group on Object RCs and Possessive RCs was the lowest (0.77 and 0.87, respectively) and the performance of the CA group on Subject RCs and Object of Prep. RCs was the highest (1.86 and 1.52, respectively).

Another interesting point revealed in Table 3 is the positive role of contrastive analysis in promoting L2 learners' knowledge of ungrammaticality of RPs in English RCs in that the CA group outperformed the other two groups in all RP types. As to the inferential statistics, five one-way ANOVAs were conducted to see whether the differences in group performance on the four types of RCs and also in total group performance were statistically significant or not. The results, evidenced in Table 3, indicated no significant difference among any of the groups or on any type of RC.

Accordingly, the overall findings of the analysis of the performance on the GJT pointed to the positive effects of exposure and ineffectiveness of instruction type. More specifically, the L2 learners had much more difficulty recognizing the ungrammaticality of the RCs containing RPs than admitting the grammaticality of the RCs lacking RPs. What follows (Tables 4 and 5) is the results of the analyses of the performance on the TT.

Table 4
Descriptive and inferential results for the overall performances on the TT

	Dicto. group	**CA group**	**Control group**	**F**	**df**	**Sig. (2-tailed)**
Pretest	M: 5.65 (35.31%) SD: 2.97	M: 6.38 (39.87%) SD: 2.65	M: 4.67 (29.14%) SD: 2.3	2.74	2	0.07
Posttest	M: 8.19 (51.18%) SD: 3.20	M: 6.81 (42.56%) SD: 2.71	M: 5.97 (37.31%) SD: 3.05	3.81	2	0.02
***T*-test**	T: -4.39 Df: 25 Sig: .00	t: -0.85 df: 20 Sig: 0.40	t: -1.60 df: 29 Sig: 0.11			

As presented in Table 4, the observed differences in performance were not statistically significant before the instructions (F: 2.74; *p*: 0.07) showing that the participants in different groups were at the same level as far as the ability to produce grammatical RCs (lacking RPs) was concerned. However, their performance on the post-TT indicated significant differences across the groups (F: 3.81; *p*: 0.02). The further post hoc analyses revealed that the differences lay between the Dicto. group and the control one. In other words, the dictogloss was shown to affect the overall performance on the production of the correct RCs.

In the same vein, comparison of the performance in each group between their pre- and post-TT revealed that the Dicto. group was the only group whose performance on the post-TT differed significantly from theirs on the pre-TT. The

results of further analyses of the participants' performance on each types of RPs are reported in Table 5 below.

Table 5
Descriptive and inferential results for the performances on the post-TT

	Subject RC	**Object RC**	**Object of prep. RC**	**Possessive RC**	**total**
Dicto. group					
Mean	2.58 (64.5%)	2.19(54.75%)	2.00 (50%)	1.42 (35.5%)	8.19(51.18%)
SD	0.70	0.98	0.98	1.23	3.20
CA group					
Mean	2.67 (66.75%)	1.62 (40.5%)	1.86 (46.5%)	0.67 (16.75%)	6.81 (42.56%)
SD	0.73	1.35	1.15	0.79	2.71
Control group					
Mean	2.40 (60%)	1.57 (39.25%)	1.37 (34.25%)	0.63 (15.75%)	5.97 (37.31%)
SD	0.67	1.13	1.09	0.99	3.05
ANOVA	F: 0.97 df: 2 Sig.: 0.38	F: 2.37 df: 2 Sig.: 0.10	F: 2.67 df: 2 Sig.: 0.07	F: 4.80 df: 2 Sig.: 0.01	F:3.81 df: 2 Sig.:0.02

As indicated in Table 5, the performance of the control group on RPs in Possessive RCs was the lowest (0.63) and the performance of the CA group on RPs in Subject RCs was the highest (2.67). Regarding the differences among the groups' performance on each of the RP types, the one-way ANOVA results revealed that the differences were only statistically significant in case of the performance on RPs in Possessive RCs (F: 4.80; *p*: 01). Further, the post-hoc Scheffe test was run to see where the differences lay. The results showed that the differences between the Dicto. and control groups were statistically significant, but the differences between the CA and control groups, and those of the CA and the Dicto. groups were not statistically significant. This evidenced that the Dicto. group outperformed the CA and control groups in the production of grammatical Possessive RCs which included no RPs.

To see if these observed differences across the groups were due to the instructions they had received, a one-way ANOVA and a post-hoc Scheffe test were performed on the participants' performance on the Possessive RC in the pre-TT. The results were exactly like the performance on Possessive RCs in the post-TT, i.e., there was a significant difference among the three groups (F: 1.46; *P*: 0.39) and more specifically between the Dicto. and control groups. Alternatively stated, compared to the other two groups, the Dicto. group had already been advantaged with a higher performance on such a grammatical feature from the beginning of the study before receiving the treatment.

Therefore, a one-way between group analyses of co-variance (ANCOVA) was conducted to compare the effectiveness of the treatments on the participants' performance. There was a significant difference for the post-test scores on possessive RPs among the three groups after controlling for the pre-test scores (F: 3.46; *P*: .03). However, only 8.7% of the variance in the post-test scores could be explained by the different instructional techniques, since the effect size, using eta squared, was calculated to be .087.

All in all, the findings of the analyses of the performance on the TT revealed that the dictogloss technique and not the explicit contrastive analysis had significant positive impacts on the L2 learners' overall performance but not on the individual RP types in the TT (Table 4).

Discussion

This study of instructing Iranian EFL learners in the uninterpretable feature of resumptive pronouns through contrastive analysis and dictogloss has shown that exposure to L2 target structures has a more constructive role in the learners' recognitions (GJT results) of the ungrammaticality of RPs in English RCs than the type of instruction they receive. This constructive role, indeed, was observed in the control as well as the experimental groups irrespective of the instruction type they had been exposed to. Also, further analysis of the performance differences in each RP type in each group evidenced that the performances on RPs in all RC types significantly improved after the instructions in all three groups.

Furthermore, the GJT results (Tables 2 and 3) indicated that the performance on RPs in subject RCs is close to those in Object and Object of Prep. RCs in each group, even though Persian disallows RPs in Subject RCs but allows RPs in Object

RCs and necessitates them in Object of Prep. RCs. This points to the idea that the L2 learners' native language has not facilitated the acquisition of this L2 uninterpretable feature. This similarity in performance is also observed in the participants' ability to recognize ungrammatical sentences (Table 3).

However, the learners' ability of producing RP-less English RCs (TT results) is seemingly more affected by the instruction type where the L2 learners who had received dictogloss procedure outperformed the other two groups. This effectiveness of dictogloss in the L2 learners' production ability may be due to its interactive nature which encourages co-operative learning (Wajnryb, 1990). Since the dictogloss procedure needs negotiation of meaning and negotiation of form and promotes the socio-cultural content of the class, it provides opportunities for output and interaction being in line with task-based language teaching (Ellis, 2005). This can certify dictogloss as a useful task for teaching grammatical features (Jacobs, 2003; Rashtchi, 2009; Vasiljevic, 2010).

Consistent with the above account of the positive role of dictogloss procedure in learners' production skills and the positive role of contrastive analysis in learners' recognition and comprehension abilities, Long and Robinson (2001) state that focus on form is triggered by preconceived problems with comprehension or production. It can be expected, then, that such focus on form activities can help improve either comprehension or production depending on which skill they taught. Clearly, explicit explanation (CA) aims at comprehension while the disctogloss taught production. This is supported by Stockwell (2010) who claims that using the dictogloss procedure creates the need for learners to focus on production as well as meaning. The Dicto. group outperformed the other two groups on the TT, a measure of production ability. And the CA group outperformed the other two groups on the ungrammatical GJT items, a test of comprehension ability.

Beside the pedagogical concerns, this study sought to examine the acquisition of a syntactic feature which is uninterpretable at both LF and PF levels in the L2 but only uninterpretable at LF in the L1. The findings support Tsimpli and Dimitrakopoulo (2007), investigating the rejection rate of resumptive pronouns by Greek speaking L2 learners of English, in that the acquisition of LF / PF uninterpretable features is problematic in post-childhood L2 acquisition where that feature is LF uninterpretable but PF interpretable in L1. What seems to be the cause of the participants' RP uses in different English RCs is that English pronouns

are misanalyzed as "weak pronouns" by the learners (Tsimpli & Dimitrakopoulo, 2007). Alternatively stated, since English lacks subject-verb agreement morphology, Persian speakers may transfer resumptive uses of agreement on the verb from their L1. This morphological misanalysis of L2 has even been overgeneralized to RPs in English Subject RCs (in the ungrammatical GJT items) where it is disallowed in Persian, the participants' L1. That is, the participants' rejection rate of the RPs in English Subject RCs was much lower than what might be expected (about 36%). In other words, the participants accepted RPs in English Subject RCs in about two-third of the ungrammatical GJT items (about 64%). However, this overgeneralization of morphological misanalysis to English Subject RCs was observed in their productions in fewer cases (about 36%).

Conclusion

The present study is devoted to investigating the extent to which two pedagogic techniques, contrastive analysis and dictogloss procedure, are effective in developing elementary EFL learners' knowledge of the ungrammaticality of RPs in English RCs and in their ability to produce grammatical English RCs as concerned RPs. The findings pointed to the importance of exposure to the target structures over that of the instruction type. Nonetheless, the L2 learners' production ability seems to be affected by the instruction type they receive. This study acknowledges the superiority of the dictogloss procedure over explicit contrastive analysis in instructing L2 learners in resumptive pronouns, an LF/PF uninterpretable feature in English but only LF uninterpretable in Persian. Regarding the type of relative clauses, possessive RCs were the most difficult for the learners.

Overall, this study seems to account for the developmental problem of language acquisition in that feature acquisition is not instantaneous with some appear later than the others. Indeed, this study lends support to the Interpretability Hypothesis which proposes that acquisition of L2 uninterpretable features causes learnability problems in post-chilhood L2 acquisition where the lingering effects of L1 is frequently documented (Hawkins & Casillas, 2008; Hawkins & Hattori, 2006; Tsimpli & Dimitrakopoulo, 2007).

The investigation presented here attempted to improve on previous studies inseveral ways: by including elementary students to examine the earlier stages of L2 acquisition; by applying pedagogic techniques to instructing an uninterpretable feature; and by examining the L2 learners' both recognition and production

abilities after receiving the instructions. All of the measures were taken, but several limitations remain. Further studies where desirable management of confounding variables is achievable could fill in the existing gap to offer more external validity. Also, some of the shortcomings not accounted for in this study include the design related issues of pre and post test homogeneity assessments, and number of the students, from among other issues which could hopefully be eliminated in future investigations. Another restrictive point is the number of items developed for the tests which could have potentially affected the results we have reached in this study. With the limited number of questions used in the GJT and TT, one is necessarily compelled to be cautious in the interpretation of the results.

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