THE ACQUISITION OF ENGLISH RELATIVE CLAUSES BY IRANIAN EFL LEARNERS:
THE IMPACT OF PROCESSING INSTRUCTION & MEANINGFUL OUTPUT-BASED INSTRUCTION

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Abstract

Studies on the learning of grammatical points have suggested the effective role of types of instruction. The current study aims at investigating the impact of Processing Instruction (PI), an input-based approach to grammar instruction introduced by Van Patten (1996), and Meaningful Output–based Instruction (MOBI), on the Acquisition of English Relative Clauses. The participants consisted of 60 intermediate Iranian EFL learners in two Treatment groups of (PI) and (MOBI) and one Control group(C). The researchers used a quasi-experimental design with a pretest- treatment-posttest sequence. As for the assessment, a Grammaticality Judgment Test (GJT) was employed, focusing on the sentence level. Experimental groups received the same input and material for the instruction but received meaningful oral and written input or output-based exercises. The relative effects of the two approaches (PI and MOBI) on the linguistic development, i.e. acquisition of relative clauses, of learners were analyzed. Having compared the results of group one and two, PI and MOBI, the researchers found that there is a statistically significant difference between the pretest & posttest of Experimental groups. Processing Instruction had more influence on the correct selection of grammatical sentences in comparison with Meaningful Output-based Instruction. Therefore, we can draw the conclusion that PI can facilitate the acquisition process of English relative clauses. In addition, comparing the results of Control group with that of Experimental groups also confirms the previous findings; besides, the participants of Control group could not outperform those of Experimental groups. However, the experimental groups could do better than the control group.

Key Words: Processing Instruction, Meaningful Output-based Instruction, Comprehension Practice, Production Practice, English Relative Clauses.

INTRODUCTION

The understanding of how input and output affect comprehension and production of target forms and structures in one's second language (L2), is a key issue in SLA research and has been the subject of several studies trying to examine the relative effects of input-based as compared to output-based instructional conditions." (Allen, 2000; Collentine, 1998; DeKeyser and Sokalski, 1996; Erlam, 2003; Nagata, 1998; Salaberry, 1997). Accordingly in this study the focus is not on "*does instruction help?*" , but on "*what types of instruction are more effective for L2 learning in formal contexts?*" The types of instruction in many studies refer to input-based and output-based instructional options. The two approaches differ in the question of whether instruction would be more effective when provided via one modality versus another ,ie., comprehension versus production(Ellis, 1999).

VanPatten's Processing Instruction(PI) (which is a type of Input-Based Instruction),is an input-based instructional technique which affects the acquisition of target forms by actively engaging learners in processing structured input, that is ,input that has been manipulated to contain many instances of the same grammatical meaning-form relationship. In this way learners are pushed to alter their existing processing strategies by changing the ways they attend to input data that result in better intake.PI provides 1)Explicit ,non-paradigmatic grammatical instructions that include input through examples and information about processing strategy .2)Structured input practice composed of meaningful tasks.3)Feedback , so PI provides 2 types of input: a)examples b) structured .

Meaningful Output-Based Instruction (MOBI) or Traditional Instruction (TI) presents learners with paradigmatic grammatical instruction with input through examples, oral and written output-based practices that move from mechanical to meaningful to open-ended communicative tasks.

In this study Intermediate Iranian Students (n=60) in 3 groups were assigned to Processing Instruction , Meaningful Output-Based Instruction and a control group. Experimental groups received the same input in instruction but received meaningful practice that was input or output based. In structured – input instruction , students pay attention to the form of the target structure and process input for meaning through tasks that do not require them to produce the target structure. The structured –input group receives explicit instruction on the key grammatical item and practices this feature through input-based activities. In meaning-oriented output- based instruction, students are intended to focus only on meaningful activities, and are given opportunities to produce language.

Van Patten and Cadierno (1993) compared the effects of processing instruction (PI) with a traditional type of output-based instruction (TI) to examine whether or not the processing strategies that learners take to the task of comprehension without forcing them to produce the newly taught forms ,could be effective on the learners' developmental systems .They instructed two groups of learners, word order and object pronouns in Spanish using PI and TI approaches.Van Patten and Cadierno concluded that PI was superior over OI because the PI learners were both able to interpret and accurately produce the target forms despite the fact that they had never been instructed on the production of forms. In contrast, the OI group was only able to produce object pronoun but not able to interpret.

However, not all the PI studies produced convincing evidence for the advantage of PI over OI. Therefore the purpose of the current study is to compare the linguistic development of Iranian EFL learners who have received structured-input instruction (comprehension practice) for relative clauses in English to the linguistic development of learners who have received output-based instruction (production practice) ,through Grammaticality Judgment Test to examine whether the PI advantage over OI argued by Van Patten (1996,2002) could be generalized to other EFL contexts , in this case Iran.

THEORETICAL AND EMPIRICAL BACKGROUND

Since recent researches have demonstrated the need for formal instruction for learners to achieve high levels of accuracy, grammar teaching and its role in second language acquisition has become the focus of most current investigation .Several studies have been done on ways to combine some form of grammar instruction with the provision of opportunities for communicative input and output , and a number of studies have researched their effectiveness.

VanPatten (1993, 1996, and 2002) suggests that one way to teach grammar communicatively is through processing input or what he called processing instruction. In this approach an initial exposure to explicit instruction is combined with a series of input processing activities, consisting mainly of tasks that encourage the comprehension of the target structure rather than its production. These activities have been suggested to help learners to create form-meaning connections in input and hence process grammar for meaning (Lee & VanPatten, 1995).

Processing instruction mainly aims at helping learners to readjust their inefficient processing strategies. Unlike output-based instruction which emphasizes grammar rules and oral/written production practice, the purpose of processing instruction is to change the prossessing strategies of learners for input and to make them develop better form-meaning mappings which results in a grammatically richer intake.Meaningful output- based instruction consists of structured output activities which are meaningful activities in nature. They all carry a meaningful context and the target forms are produced not with the sole intention of practicing the target item, but rather to communicate opinions, beliefs, or other information related to designated topic.

After the publication of VanPatten and Cadierno (1993), in which processing instruction was first researched and compared with output-based instruction, a number of empirical studies have appeared that have investigated the role and effects of processing instruction compared to traditional or meaningful output-based instruction .Some of the main studies and their results are as follows :
Vanpatten and Cadierno (1993) conducted the study to investigate the relative effects of Processig Instruction in altering a processing problem known as the first noun principle. They investigated the impact of Processing Instruction and Meaningful Output-based Instruction on the acquisition of direct object pronouns as learners seem to misinterpret sentences containing direct object pronoun in Spanish .The results from the statistical analyses showed that Processing Instruction is superior to Meaningful Output-based Instruction.

A review by Cheng showed both instructional groups produced more *estar* tokens than the control group.

VanPatten and Wong (2004) compared again the effects of Prossessing Instruction and Meaningful Output-based Instruction on the acquisition of French *Faire* causative.The results again confirmed the findings of the previous studies. While some of the studies provided supportive evidence for the superiority of PI over other types of grammar interventions, some other studies which involved a range of different grammatical structures and target languages failed to produce evidence supporting the advantage of processing instruction over output-based instruction.

Research Questions
The present study was aimed at answering the following questions:
1) Does Processing Instruction have any influence on the acquisition of English Relative Clauses of EFL Learners?
2) Does MOBI have any influence on the acquisition of English Relative Clauses of EFL Learners?
3) Is there any difference between PI & MOBI regarding the acquisition of English Relative Clauses?

Hypotheses
1) Processing Instruction doesn't have any influence on the acquisition of English Relative Clauses of EFL Learners.
2) MOBI doesn't have any influence on the acquisition of English Relative Clauses of EFL Learners.
3) There is no difference between PI & MOBI regarding the acquisition of English Relative Clauses.

METHOD

Participants
The participants consisted of 60 intermediate Iranian EFL learners from Jahan-E-Elm Language Institute in two Treatment groups of (PI) and (MOBI) and one Control group(C) in order to reduce the effect of selection bias .They were students who (a) had little or no previous knowledge of the target structure which was measured by administrating a Grammaticality Judgment Test (GJT) as a pretest, focusing on the sentence level. (b) attended all the training , treatment , and assessment sessions, and (c) completed all the assessment measures .Gender was not a variable of the study .

Target Structure
The target structure in this study was the English relative clauses. Pedagogically, the English relative clauses seemed a good target form to be chosen because they presents lots of problems for Iranian EFL learners both in production and comprehension ,both in oral and written modes, and even translation, especially reduced

forms and defining and nondefining relative clauses are very problematic . Also however not exactly but to some extent the use of the relative pronoun as the subject instead of real subject is related to the "the first-noun principle "of IP theory (VanPatten, 2002).The principle holds that learners usually tend to use a default processing strategy that assigns the role of subject to the first noun or phrase they see or hear in the input.

In using relative clauses the role of the relative pronouns as subjects at the beginning of a sentence match the default prossessing strategies but using a different word (a relative pronoun) instead of the default nouns or pronouns tends to make problems in prossessing strategies which inhibit them from prossessing input efficiently .Thus, instruction should change the way learners process input to affect the quality and /or the quantity of intake and consequently affect the linguistic development.

Procedures

Developing the Treatment task: Experimental groups, PI and MOBI, received the same input and material for the instruction but received meaningful oral and written input or output-based exercises. Therefore two separate types of PI and MOBI materials were produced based on the VanPatten's (1996, 2002) guidelines .The PI materials consisted of (1)a brief script of metalinguistic information about the target form , (2) some explicit explanation about the typical processing problems that Iranian EFL learners usually have in interpreting or producing relative clauses , and (3)structured input activities including referential tasks (pictorial and non-pictorial sentences) and affective tasks (non-pictorial sentences) presented in oral and written modes.Referencial activities are defined by VanPatten as "those for which there is a right or wrong answer and for which the learner must rely on the targeted grammatical form to get meaning "(2002,p.766).In contrast , the affective tasks are aimed at providing more typical examples of the target form as input by engaging learners in prossessing information about the real world . Both types of activities were designed to push learners to process (not to produce) the information presented in the input containing relative clauses.

The MOBI materials consisted of (1) the same brief script of metalinguistic information about the target form , and (2) production activities (pictorial and non-pictorial sentences) (oral and written)requiring the participants to use the relative pronouns to produce or complete the written & oral tasks .Both types of activities were developed at the sentence level.

Assessment Measures: For the assessment, a Grammaticality Judgment Test (GJT) was employed, focusing on the sentence level, to evaluate the effects of the treatments on the acquisition of the target form.The test consisted of 40 senteces related to different grammatical points about relative pronouns .The students were asked to judge and check whether the sentences were grammatically possible or impossible .They had 7 seconds for each sentence, 30 seconds for reading the instruction and 4.5 minutes for doing the test.

For validating the content of the test, it was reviewed by an English-Persian bilingual and 3 Iranian EFL teacher who had many years experience in teaching English.

RESULTS

Comparing the data obtained from first administration of GJ test with that of second administration, the following results were found:
Using ANOVA, the overall grammaticality vs. ungrammaticality for each group of participants was estimated .In the first group ,i.e. Information Processing group , the participants accepted ungrammatical items as grammatical (correct) less than grammatical items , i.e., 92%, $(F_{(2,44)} = 103.89, P<0.001)$. Therefore, it can be concluded that PI model of instruction has had a statistically significant impact on the acquisition of Relative Clauses as measured by GJ test.

Considering the second group, MOBI, it was found that 86% of participants selected the correct grammatical sentences, $(F_{(1,30)} = 43.91, P<0.001)$. Again, like the previous case, it is clearly understood that MOBI influenced the acquisition of Relative Clauses to a great extent.

Finally, in the control group, the participants accepted ungrammatical items as correct items more than grammatical items, i.e. 62% (F(1.70)=210.51, P<0.13).Also the P-value indicates that there was no statistically significant influence on the acquisition of Relative Clauses when learners were taught using traditional method grammar instruction employed by the teachers in Hafez Language Institute.

Comparing the results of group 1 and 2, PI and MOBI, it is found that Processing Instruction had more influence on the correct selection of grammatical sentences in comparison with MOBI. Almost 88% of learners in PI group selected the correct sentences in the second administration of GJ test.

Table 1: One-Way ANOVA of Pre-test and Posttest Results

Source	SS	DF	MS	F
PI	27.991	3	13.949	9.59
MOBI	21.244	5	8.441	3.25
CONTROL	17.445	11	1.454	1.

Using α =0.05, we have F (2, 12) = 3.89, P<0.05. Since the test statistics is much larger than the critical value, we can reject the first null hypothesis as the PI doesn't have any influence on the acquisition of English Relative Clauses of EFL learners, and conclude that there is a statistically significant difference between the pretest & posttest of PI group. The P- value for 9.59 is 0.00325 so that the test statistics is significant at that level.

DISCUSSION & CONCLUSIONS

The study led to some new findings about the relative effectiveness of processing instruction and meaningful output-based instruction to grammar acquisition. In this study, unlike the other previous studies, the purpose was not to check the learners' interpretation and production abilities but the linguistic development of the learners after two different types of treatment (interpretation based and production based) by grammaticality judgment test to decide whether the sentences are grammatically possible or impossible. The study indicated that both PI and MOBI groups resulted in linguistic development but comparing the results of group 1 and 2, PI and MOBI, it is found that Processing Instruction had more influence on the correct selection of grammatical sentences in comparison with MOBI. The difference of statistical results between the PI and MOBI group was not significant, though. The finding that PI group improved significantly is in line with VanPatten's (2002) argument that PI helps L2 learners modify their underlying system and possessing strategies and maximize their intake by pushing them away from incorrect input possessing strategies, which results in improving the accuracy of both comprehension and production of grammar features.

To conclude, this study provided further evidences for the PI as an instructional method and its significance on linguistic development of EFL learners. Therefore as an implication of the study in teaching ,this is an encouraging result for the designers of language programs that require learners to work autonomously and put emphasis on the PI instruction in EFL teaching especially in teaching grammar.

However the study doesn't ignore the significance of MOBI in linguistic development but by trivial difference in statistical results between the two types of instructions , it also highlights the role of MOBI instructions in linguistic development .Therefore according to this study both PI and MOBI instructions are influential in linguistic development , and use should be made of both approaches to achieve higher and more persistent results .It is noteworthy that the result of this study are related to the impact of these instructions on the acquisition of English relative clauses in this context and the result might not be generalized to all the grammatical structures or to all EFL contexts. So it can be a good idea for other researchers to investigate other grammatical structures and other EFL contexts.

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