A Comparative Study of Effects of Input-Based, Meaning-Based Output, and Traditional Instructions on EFL Learners' Grammar Learning

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Abstract

This quasi-experimental study examined the effects of input-based, meaning-based output (MO) and traditional instruction (TI) on EFL learners' grammar learning. To this end, 120 junior high school students were selected from 4 intact classes. Each class was assigned to an instructional condition, that is, textual enhancement (TE), input flood (IF), MO, and TI. Before the treatment, a multiple-choice grammar test (MCGT) and a written production test (WPT) were administered to assess the participants' knowledge of the L2 structures (i.e., past simple and future simple tense). One week after the last treatment session, the MCGT and WPT were administered again. Scores were analyzed through one-way ANCOVA and Fisher's LSD post-hoc tests. Results revealed that the participants in the input-based instruction groups (TE and IF) outperformed those in the MO and TI groups. Implications arising from these findings are also explained.

Keywords: Input-Based Instruction; Output-Based Instruction; Traditional Instruction; L2 Grammar Learning

1. Introduction

In the last two decades, the interest of second language (L2) researchers and practitioners has shifted from traditional techniques to those that encourage L2 learners to pay more attention to L2 forms of language (Shintani, 2015). The reason behind this pedagogic tendency is that form awareness contributes to L2 learning. In the same vein, Smith (1991) proposed the consciousness-raising theory which implies a deliberate focus on the formal properties of language with the aim of facilitating L2 knowledge development initiated by either the teacher or the learner during initial exposure or during practice. "The consciousness-raising approach has been contrasted with traditional approaches to the teaching of grammar (e.g., drilling, sentence practice, sentence

combining), in which the goal is to establish a rule or instill a grammatical pattern directly" (Richards & Schmidt, 2013, p. 119).

Following consciousness-raising theory, many attempts have been made to develop techniques with the purpose of promoting L2 learners' noticing (Smith, 1991; White, 1998). One of the prominent techniques which supports raising L2 learners' attention is called input enhancement in which teachers manipulate input with the aim of making it more salient and help L2 learners to notice it (Smith, 1991). Input enhancement techniques have been used in input-based instruction which "involves the manipulation of the input that learners are exposed to or are required to process" (Ellis, 2012, p. 285). Input-based instruction usually takes the form of textual enhancement (TE) or input flood (IF), also addressed in this study.

Some researchers (e.g., Lee, 2007; Lee & Huang, 2008) proposed that the use of TE techniques or varied typographical cues such as **bold facing**, underlining, *italicizing*, and CAPITALIZING increase the physical input saliency. In effect, conscious attention to input is necessary for learning to happen. By consciously noticing specific forms in the input, L2 learning will be facilitated (Schmidt, 2001). This type of enhanced input leads L2 learners to notice and pay attention and raise their consciousness and awareness toward input that is enhanced (e.g., Robinson, 1997; Schmidt, 2001). Some L2 scholars (e.g., Doughty & Williams, 1998; Rassaei, 2012, 2015; Wong, 2005) have found that TE attracts L2 learners' attention more. Hence, it facilitates the process of L2 learning.

On the other hand, there is another input-based instruction technique called IF that aims to facilitate the process of L2 learning through mere high-frequency exposure to L2 (Reinders & Ellis, 2009). "The assumption is that highly frequent tokens of target structure in input make the target form noticeable and salient to learners" (Rassaei, 2015, p. 3). Some scholars (e.g., Gass, 1997; Hernandez, 2008; Wong, 2005) have argued that this artificial increase is expected to help L2 learners with noticing and then acquiring L2 items. On the other hand, some (e.g., Laufer, 2006; Williams & Evans, 1998) have challenged the effectiveness of IF and emphasize that noticing tL2 items does not necessarily show that they will be processed and become intake.

In contrast to input-based approaches to L2 learning, there are some scholars (e.g., Izumi, 2002; Swain, 2005; Toth, 2006) who allocate more positive and pivotal role to meaning-based output (MO) in developing L2 learning. These researchers do not deny the essential role of input in L2 learning. However, they reject the view that input alone is sufficient for L2 learning. In other words, output has been viewed as indispensable as input in developing L2 learners' knowledge (Izumi, 2002; Swain, 2005). The MO instruction in L2 learning is highly influenced by Swain's (1995, 2000, 2005) output hypothesis that assumes four major functions

for output in facilitating L2 learning: noticing, metalinguistic, fluency, and hypothesis-testing. First, output provides (MO) learners with some opportunities to use L2 fluently that is called the fluency function of output. In the second function of output, the hypothesis-testing function, output enables L2 learners to test the comprehensibility and well-formedness of their utterances better against the feedback they receive from their interlocutors. The third function of output, the noticing function, provides opportunities for L2 learners "to notice a gap between what they intend to say and what they can say leading them to recognize what they don't know or know only partially" (Swain, 1995, pp. 125-126). The fourth function of output is the metalinguistic function by which it is argued that "as learners reflect upon their own L2 use, their output serves a metalinguistic function, enabling them to control and internalize linguistic knowledge" (Swain, 1995, p. 126).

Another approach to teaching grammar is the traditional instruction (TI) which is defined as explanation of the rules plus output practices through mechanical drills (VanPatten, 2000). The MO instruction has two features which are absent in TI. First, in the MO instruction, L2 learners are asked to be involved in activities which require the exchange of previously unknown information. Second, L2 learners are asked to access a form or a structure with the intent to express meaning (Lee & VanPatten, 1995). Moreover, unlike TI, the purpose of the input-based approach is to change the way that L2 learners attend and process input, considering that acquisition is an input-dependent process and takes place when L2 learners are exposed to meaning-bearing input (VanPatten, 1996).

The role of input and output practice in L2 teaching has been an issue of debate. Because there are controversial findings in the literature, more research is needed to investigate the effect of the input-based versus MO techniques on L2 grammar learning. Moreover, the effect of TI on L2 grammar learning needs to be compared with that of the input-based and MO instruction techniques to obtain a clearer picture of the efficacy of these techniques in L2 grammar learning. To fill in the existing gap, this study aimed at examining the effects of the input-based instruction techniques (i.e., TE and IF), the MO instruction, and TI on Iranian EFL learners' grammar learning.

2. Literature Review

Most previous studies examining the effect of the input-based and MO instructions on L2 learning provide evidence that both instructional conditions can be conducive to L2 learning. However, the results of the empirical studies are, to some extent, divergent and contradictory and can be classified into three categories: First, the studies indicating that the input-based and MO instructions are equally effective in developing L2 learning (e.g., Loewen, Erlam, & Ellis, 2009); second,

the studies providing evidence for the effectiveness of the input-based over MO instruction (e.g., Benati, 2005; Farley, 2001); finally, the studies showing the superiority of the MO over input-based instruction (e.g., Izumi, 2002; Morgan-Short & Bowden, 2006; Rassaei, 2012; Younesi & Tajeddin, 2014). These studies are reviewed below.

VanPatten and Cadierno (1993) were the first to compare the input-based instruction and TI. They assigned the participants into three groups of the input-based instruction, TI, and control. The results of the interpretation and production tasks revealed that the group who had received the input-based instruction outperformed both TI and control groups in the interpretation task. However, in the production task, the input-based and TI groups performed equally well, but their performance was better than the control group.

Farley (2001) conducted a study on 29 participants who had enrolled in a fourth-semester Spanish course. They were assigned into two treatments: input-based instruction and MO instruction. The results showed that the input-based instruction had an overall greater effect than the MO instruction on how the learners interpreted and produced the Spanish subjunctive of doubt. The results pinpointed the important role of input in L2 learning and the benefits of the input-based instruction.

In another study, Izumi (2002) investigated the impact of output on noticing. Izumi (2002) compared the effects of TE and output tasks on the ESL learners' acquisition of English relativization. He found a facilitative effect for the output task on promoting the noticing and acquisition of the L2 form but found a nonsignificant effect for the TE task as far as the acquisition of the form was concerned. Later, Benati (2005) investigated the effects of the input-based instruction, TI, and MO instruction on L2 grammar learning. The participants were Chinese and Greek school-age learners of English. They were divided into three groups. One interpretation and one production measure were used in a pretest-and-posttest design. The results revealed that the input-based instruction had positive effects on the processing and learning the L2 feature. The input-based instruction group outperformed the TI and MO instruction groups in the interpretation task. However, in the production task, the three groups made equal gains.

Morgan-Short and Bowden (2006), further, examined the effects of the input-based and MO instruction on L2 learning. Forty-five first-semester Spanish students were assigned to the input-based instruction, MO instruction, and control groups. The experimental groups received the same input in instruction, but received meaningful practice that was input- or MO. Both experimental groups showed significant gains on the immediate and delayed interpretation and production tasks. The repeated-measures ANOVA showed that, for interpretation, both experimental

groups outperformed the control group. For production, only the MO-based group did better than the control group. The findings also indicated that not only the input-based but also the MO instruction can lead to linguistic development.

Concerning L2 grammar learning, Loewen et al. (2009) delved into incidental learning of third person *-s* by adult English learners. The participants were provided with explicit instruction and the input-based techniques. They were tested before and after exposure on two measures that had been created to differentially require the deployment of explicit knowledge (untimed GJT) and implicit knowledge (elicited oral imitation test). The results showed that focusing the learners' attention on one grammatical feature did not lead to the incidental acquisition of another grammatical feature. Also, explicit and implicit knowledge tests were administered and revealed no difference.

Rassaei (2012) also investigated the effects of the input-based and MO instructions on the development of L2 grammatical knowledge. The participants included 129 third-semester Persian speaking EFL learners in five intact classes, functioning as four experimental groups and one control group. Two experimental groups were exposed to two types of the input-based instruction, TE and IF. The participants in another experimental group were required to produce MO, including the L2 structures. The last experimental group received explicit instruction. The results of the untimed GJT, multiple-choice grammar (MCG), and written production (WP) tests administered as the pretest, immediate, and delayed posttests revealed that both input-based and MO instructions can lead to the development of L2 knowledge. In other words, TE and MO had similar effects on the participants' performance in the untimed GJT. However, the results of one-way ANOVA on the MCG and WP immediate and delayed posttest scores indicated the superiority of output practice over TE in promoting the learners' knowledge of the L2 structures.

Finally, Younesi and Tajeddin (2014) examined the effect of the input-based and MO instructions on the learning of English nominal clauses by freshmen undergraduate students. Moreover, it was attempted to detect whether there were any significant differences between the learners' receptive and productive knowledge of nominal clauses. The results revealed that both input-based and MO instructions helped the learners improve their receptive knowledge of grammar effectively. However, the input-based group did not significantly outperform the MO group in their gains of receptive knowledge of grammar. The findings, further, showed that the MO group significantly outperformed the input-based group in their productive knowledge of grammar.

As shown above, the results of the previous studies that compared the effects of the input-based and MO instructions with each other are far from conclusive. Therefore, more research is needed to investigate the effect of input-

based, MO, and TI on L2 grammar learning. Based on the existing gap in the literature, this study investigated the effects of the input-based instruction, including TE and IF techniques, MO instruction, and TI on Iranian EFL learners' English grammar learning. To this end, the following research question was addressed:

- To what extent do the input-based (i.e., TE and IF), meaning-based output, and traditional instructions have different effects on EFL learners' grammar (i.e., past simple and future simple tense) learning?

3. Methodology

3.1 Design

This study adopted a quasi-experimental design involving pretest, treatment, and posttest. The participants received treatment in six sessions during three weeks, beginning one week after the pretest. The posttest was administered one week after the last treatment session.

3.2 Participants

This study was carried out with 120 participants at four intact classes. Each class was assigned to an instructional condition: TE group (n = 29), IF group (n = 32), MO group (n = 31), and TI group (n = 28). The participants were male 8th graders from a public junior high school in Ahvaz, Iran, and their age ranged from 13 to 15. The average age was 13.9 (SD = 0.42). A bio questionnaire was given for collecting the participants' full biographical background, and it was ensured that the participants' learning was limited to classroom instruction. Because the participants were selected in intact classes and there were no randomization and also to control for initial group differences, ANCOVA was run. It was found that the participants were homogeneous in terms of the knowledge of the L2 structures.

3.3 Instrumentation

3.3.1 Multiple-choice grammar test and written production task

Two tests were administered on two occasions as the pretest and the posttest: a multiple-choice grammar test (MCGT) and a written production task (WPT). The inclusion of these two testing instruments helped the researchers measure both participants' receptive and productive knowledge. Hence, more valid conclusions could be drawn from the results. A description of the tests follows:

- *WPT*

This test, developed and used to measure the participants' ability to produce correct sentences using the English past and future tense, consisted of 30 items, 20 of which assessed the production of the L2 forms plus 10 distracters. The

participants were required to look at 30 pictures and use the verbs provided to produce a sentence for each picture. The items, serving as distractors, elicited the participants' production of English present tense. The scoring procedure used in this discrete item test was 1 point for each correct form and 0 point for each incorrect form. The test began with directions and an example regarding how to answer the items (see a sample of the test items in Appendix A).

- *MCGT*

In the MCGT, the participants were required to select the correct answer from four choices. Like WPT, the MCGT included 30 items. The MCGT included 20 items assessing the L2 structures and 10 distracters. The correct answers received 1 point. The highest score on this test was 20. The allocated time was 15 min. Two versions of the tests were developed for the pretest and the posttest by counterbalancing the order of the items and the choices (see a sample of the test items in Appendix B).

- *Reliability and validity of the tests*

To measure the reliability of the WPT and MCGT scores, Pearson correlation coefficients were calculated for the pretest and posttest scores. The Pearson correlation coefficients of the WPT for the TE, IF, MO, and TI groups were .81, .77, .84, and .79, respectively. Moreover, the Pearson correlation coefficients of the MCGT for the TE, IF, MO, and TI groups were .78, .82, .80, and .86, respectively. According to Cohen (1988), the reliability coefficient above .70 is high. Hence, the obtained reliability coefficients of the tests ranging from .77 to .86 are high and acceptable. To ensure the content validity of the tests, the comments of three experts holding Ph.D. in TEFL were sought. Each strongly confirmed the appropriateness of the tests in terms of content and objectives in measuring participants' knowledge of past simple and future simple tense.

In order to examine the construct validity of the instruments, the differential-group experiment was employed. In this approach, a researcher compares the performance of the two groups on a test: One group that obviously has the construct and another group that clearly does not (Nunan, 1992). To this end, the testing instruments were piloted with a group of 8^{th} graders (n = 27) and a group of 12^{th} graders (n = 26) at two public high schools in Ahvaz, Iran. Table 1 depicts the mean scores and standard deviations of the pilot groups. Based on the number of the items examining the L2 structures in each instrument, the maximum score was 20 for both MCGT and WPT:

Table 1. *Mean Scores and Standard Deviations for Pilot Groups*

	8th Graders		12th Graders	
	M	*SD*	*M*	*SD*
MCGT	5.66	.72	17.30	1.64
WPT	3.20	.55	16.75	1.25

As Table 1 shows, whereas the 8th graders, not yet receiving instruction on the L2 structures, performed poorly, the 12th graders obtained high scores on both tests (i.e., MCGT and WPT). According to Nunan (1992), the fact that the tests could differentiate properly these two groups can serve as an evidence for the construct validity of the tests.

3.4 Materials

3.4.1 L2 structures

The L2 structures were past simple and future simple tense. These L2 structures were selected after considering VanPatten's (1996) primacy of content words principle. According to this principle, L2 learners tend to pay more attention to content words at the expense of ignoring function words in order to obtain maximum information from input. For example, in the sentence *Paul played tennis at the club yesterday*, both the lexical item *yesterday* and the *-ed* verb ending communicate past tense. According to the content words principle, L2 learners will naturally rely on the lexical item over the verb inflection in order to gather semantic information. In this study, past simple tense was presented to the participants by focusing on past form of both regular verbs accompanied by *-ed* and irregular verbs. Moreover, future simple tense was exposed to the participants with modal auxiliary verb *will*.

3.5 Operationalization

Four techniques operationalized in this study were TE, IF, MO, and TI. TE was operationalized by **boldfacing** and underlining the L2 structures in the input. IF was operationalized by enriching the treatment materials with extra tokens of the L2 features. TI was operationalized by explicitly explaining the rules followed by output practice which was mechanical. Finally, MO was operationally defined as a technique which aimed to develop the participants' knowledge of L2, primarily through asking them to produce meaningful sentences. Unlike the TI group, the MO group was always engaged in output communicative practice (Benati, 2005).

3.6 Treatment and Data Collection Procedure

Prior to conducting the study, the participants and the principal of the high school completed consent forms. The researchers themselves carried out the treatment, and there was no need for recruiting other teachers. First, the classes were randomly assigned into four experimental groups: TE, IF, MO, and TI. All the groups received six treatment sessions in three weeks. The L2 structures were past simple and future simple tense. To draw more valid conclusions, two test types (i.e., MCGT and WPT) were used. Both tests were administered one week before and one week after the treatment. Each treatment session lasted 45 min.

During the treatment sessions, the TE group was exposed to 12 passages chosen from *Introductory Steps to Understanding* by Hill (1980). The passages were presented to the participants in six separate sessions, each session two passages. Each passage contained approximately 150 words. The passages were manipulated by two TE techniques (i.e., underlining and **boldfacing**). In order to maintain the participants' focus on meaning, each passage was followed by three comprehension questions. No strict time limit was set for the participants to complete the activities. As the input-based instruction aims to force L2 learners to process form to get meaning (in this case, learning the English past and future simple tense), no activities were developed where the participants had to produce the L2 grammatical item.

For the IF group, there was no typographical manipulation, but the number of the tokens of L2 items (i.e., past simple and future simple tense) was increased to raise the participants' grammatical awareness. The total number of the L2 structures in the IF group materials was twice the number of the L2 structures appearing in the TE group materials. Like the TE group, 12 passages were presented to the participants in six sessions. Each passage was followed by three comprehension questions. The activities were also untimed.

In the MO group, no mechanical activities were included in the output practice. The structured output activities used in the MO treatment were developed following the guidelines provided by Lee and VanPatten (1995). The participants were required to produce the linguistic feature (English past and future simple tense), and they were always engaged in output communicative practice. As stated by Lee and VanPatten (1995), structured output activities have two main characteristics: (1) They involve the exchange of previously unknown information; and (2) they require L2 learners to access a particular form or structure in order to express meaning. The focus was on one form and one meaning (talking about past and future events), and the participants in the MO group had to respond to the content of the output (see a sample of the activities used in Appendix C).

The materials constructed for the TI treatment contained explicit information (i.e., explanation of the rules in the case of the English past and future simple tense), which was followed by output practice (see a sample of the activities used in Appendix D). All the activities were constructed to make the participants produce the L2 linguistic features. The activities in the traditional group were mechanical practice.

3.7 Data Analysis

To answer the research question, one-way ANCOVA and Fisher's LSD post-hoc tests were run. Because the participants were selected in intact classes, ANCOVA was carried out to examine if there was a significant difference between the grammar posttest scores in the two groups while the pretest scores were held constant. The data were analyzed through SPSS, version 21. A one-way ANCOVA analysis was run for the WPT which measured the participants' productive knowledge of the L2 structures, and another one was performed for the MCGT that assessed the participants' receptive knowledge of the L2 structures.

4. Results

The present study examined whether the input-based, MO, and TI techniques have different effects on EFL learners' English grammar (i.e., past simple tense and future simple tense) learning. Table 2 shows the descriptive statistics of the input (TE and IF), output (MO), and traditional (TI) groups' pretest scores on the MCGT:

Table 2. *Descriptive Statistics of Input, Output, and Traditional Groups' Pretest Scores on MCGT*

Experimental Groups	Mean	*SD*	*N*
IF	5.17	1.07	32
TE	4.89	1.16	29
TI	5.03	.97	28
MO	5.42	.85	31
Total	5.13	1.01	120

Table 2 illustrates the mean scores of the participants in the input groups: IF (M = 5.17, SD = 1.07) and TE (M = 4.89, SD = 1.16), the TI group (M = 5.03, SD =.97), and the MO group (M = 5.42, SD =.85).

Table 3 shows the descriptive statistics of the input (TE and IF), output (MO), and traditional (TI) groups' posttest scores on the MCGT:

Table 3. *Descriptive Statistics of Input, Output, and Traditional Groups' Posttest Scores on MCGT*

Experimental Groups	Mean	*SD*	*N*
IF	13.63	2.59	32
TE	13.67	2.34	29
TI	11.67	1.75	28
MO	12.13	1.87	31
Total	12.78	2.32	120

As shown in Table 3, the mean scores of the participants in the input groups, IF (M = 13.63, SD = 2.59) and TE (M = 13.67, SD = 2.34), were higher than those in the output group, MO (M = 12.13, SD = 1.87), and the traditional group, TI (M = 11.67, SD = 1.75). After checking the assumptions necessary for computing ANCOVA, it was found that the assumptions, including linearity, homogeneity of regression of slopes, and reliability of covariate, were met. Then, a one-way ANCOVA was carried out to examine if there was a significant difference between the posttest scores of the four groups while the pretest scores were held constant (see Table 4):

Table 4. *Results of ANCOVA on MCGT Posttest Scores for Input, Output, and Traditional Groups*

Source	Type III Sum of Squares	*df*	Mean Square	*F*	*Sig.*	Partial Eta Squared
Corrected Model	200.42	4	50.105	13.14	.00	.31
	363.13	1	363.135	95.23	.00	.45
MCGT Pretest	105.26	1	105.260	27.60	.00	.19
Groups	75.85	3	25.282	6.63	.00	.15
Error	438.51	115	3.813			
Total	20223	120				
Corrected Total	638.92	119				

Table 4 shows a significant difference between the groups on the posttest scores of the MCGT, F (3, 115) = 6.63, $p < .05$, partial η^2 = .15. There was a significant difference between the participants' performance on the pre and posttests. According to Cohen (1988), the value of partial η^2 is .15, which is a large effect size. In order to locate the differences, Fisher's LSD post-hoc tests were computed (see Table 5):

Table 5. *Fisher's LSD Post-Hoc Tests*

(I) Experimental Groups	(J) Experimental Groups	Mean Difference (I-J)	Std. Error	*Sig.*
IF	TE	.27	.507	.60
	TI	1.87	.505	.00
	MO	1.54	.504	.00
TE	IF	-.27	.507	.69
	TI	1.60	.510	.00
	MO	1.27	.507	.01
TI	IF	-1.87	.505	.01
	TE	-1.60	.510	.00
	MO	-.32	.505	.52

Note. Dependent Variable: MCGT Posttest

Table 5 shows that the mean scores of the IF group were significantly higher than the TI (MD = 1.87, $p < .05$) and MO (MD = 1.54, $p < .05$) groups. The mean scores of the TE group were also significantly higher than the TI (MD = 1.60, $p < .05$) and MO (MD = 1.27, $p < .05$) groups. This means that both input groups outperformed the output and traditional groups. However, the results showed no significant difference between the TE and the IF groups, as well as between the TI and the MO groups.

Table 6 depicts the descriptive statistics of the input (TE and IF), output (MO), and traditional (TI) groups' pretest scores on the WPT:

Table 6. *Descriptive Statistics of Input, Output, and Traditional Groups' Pretest Scores on WPT*

Experimental Groups	Mean	*SD*	*N*
IF	2.81	.45	32
TE	2.90	.38	29
TI	3.01	.52	28
MO	2.85	.57	31
Total	2.89	.48	120

Table 6 illustrates the mean scores of the participants in the input groups: IF (M = 2.81, SD = .45) and TE (M = 2.90, SD =.38), the TI group (M = 3.01, SD = .52), and the MO group (M = 2.85, SD =.57).

Table 7 shows the descriptive statistics of the input, output, and traditional groups' posttest scores on the WPT:

Table 7. *Descriptive Statistics of Input, Output, and Traditional Groups' Posttest Scores on WPT*

Experimental Groups	Mean	*SD*	*N*
IF	12.90	2.54	32
TE	13.23	1.75	29
TI	11.07	1.66	28
MO	11.40	1.65	31
Total	12.15	2.13	120

As displayed in Table 7, the mean scores of the participants in the input groups, IF (M = 12.90, SD = 2.54) and TE (M = 13.23, SD = 1.75), were higher than those in the output group, MO (M = 11.40, SD = 1.65), and the traditional group, TI (M = 11.07, SD = 1.66). A one-way ANCOVA was carried out to examine if there was a significant difference between the posttest scores of the four groups while the pretest scores were held constant (see Table 8)"

Table 8. *Results of ANCOVA on WPT Posttest Scores Between Input, Output, and Traditional Groups*

Source	Type III Sum of Squares	*df*	Mean Square	*F*	*Sig.*	Partial Eta Squared
Corrected Model	136.304	4	34.076	9.72	.00	.25
	993.119	1	993.119	283.40	.00	.71
WPT Pretest	32.138	1	32.138	9.17	.00	.07
Exp. Groups	93.798	3	31.266	8.92	.00	.19
Error	402.996	115	3.504			
Total	18254.00	120				
Corrected Total	539.30	119				

Table 8 shows a significant difference between the groups on the posttest scores of the WPT, F (3, 115) = 8.92, $p < .05$, partial η^2 = .19. There was a significant difference between the participants' performance on the pre and posttests. The value of partial η^2 is .19, which is a large effect size (Cohen, 1988). To locate where the differences lie, Fisher's LSD post-hoc tests were computed (see Table 9).

Moreover, the mean scores of the TE group were significantly higher than the TI (MD = 2.14, $p < .05$) and MO (MD = 1.70, $p < .05$) groups. This means that both input groups outperformed the output groups. However, the results showed no significant difference between the TE and the IE groups, as well as between the TI and the MO groups.

Table 9. *Fisher's LSD Post-Hoc Tests*

(I) Experimental Groups	(J) Experimental Groups	Mean Difference (I-J)	Std. Error	*Sig.*
IF	TE	-.42	.484	.39
	TI	1.72	.485	.00
	MO	1.30	.488	.01
TE	IF	.42	.484	.39
	TI	2.14	.483	.00
	MO	1.70	.485	.00
TI	IF	-1.72	.485	.00
	TE	-2.14	.483	.00
	MO	-.42	.484	.39

Note. Dependent Variable: WPT Posttest

5. Discussion and Conclusion

The results revealed that there were significant differences between the participants' performance on the posttests. The TE and IF groups outperformed the MO and TI groups. In other words, the input-based instruction had superiority over MO and TI. The findings are in line with previous studies which focused on the primary role of input over output (e.g., Benati, 2005; Farley, 2001; VanPatten & Cadierno, 1993). VanPatten and Cadierno (1993) and Benati (2005), however, did not find any significant difference between the input-based instruction, MO, and TI in the production task, whereas in the present study, the groups who had received the input-based instruction outperformed both MO and TI groups in both receptive and productive tasks.

Moreover, the findings showed that making input more salient by frequency or enhancement can raise the awareness level of L2 learners, which is a crucial factor in L2 learning (e.g., Smith, 1991; White, 1998). The impact of input enhancement on L2 learning is supported both theoretically and empirically (e.g., Hulstijn, 1989; Schmidt, 1990, 1995). The findings the idea that using the increased tokens of input L2 forms can attract L2 learners' attention (Reinders & Ellis, 2009). The results also confirm Lee's (2007) argument that L2 learners who are reading textually enhanced materials are inherently engaged in a quasi-dual task, that is, on the one hand, they are reading for meaning and, on the other hand, they are processing L2 forms for acquisition.

It was also revealed that the input-based techniques, by increasing the perceptual saliency of specific L2 features in the input, as Smith (1993) mentioned, can facilitate L2 learners' selection process of input. One possible reason behind the

superiority of the input-based over MO instruction can be the differences in the cognitive processes they require. Actually, it can be argued that in the MO instruction, the input should be processed semantically and, then, it is reconstructed syntactically. In the semantic processing, L2 learners should use their previous knowledge and retrieve information from their long-term memory, and this factor can make learning an L2 structure more difficult.

The findings are in line with Schmidt's (1990) noticing hypothesis proposing that input will become available for intake and effective processing only if that input is noticed. The results confirm that the focus on the enhanced and enriched forms can draw L2 learner's attention to input without specific explanation from teachers (Doughty & Williams, 1998). As Schmidt (1993, p. 209) put it, attention is "the necessary and sufficient condition for the conversion of input into intake." In fact, the positive effects of the input-based instruction observed in this study can be attributed to the role of attention and noticing in L2 learning and the mediating role that attention plays between input and intake (Mackey & Gass, 2000).

On the other hand, the results showed the outperformance of the TE and IF groups over the MO instruction which is in contrast with a number of previous studies (e.g., Izumi, 2002; Loewen et al., 2009; Morgan-Short & Bowden, 2006; Rassaei, 2012; Younesi & Tajeddin, 2014) which found the superiority of the MO instruction over the input-based instruction techniques. Younesi and Tajeddin (2014), for instance, found that both the input-based and MO instruction improved EFL learners' receptive knowledge of grammar. Their findings also showed that the MO group significantly outperformed the input-based group in productive grammar test. However, the results of the present study revealed that the participants instructed through the input-based techniques (i.e., TE and IF) significantly surpassed those instructed through MO and TI. This finding is also in contrast with Swain's (1995, 2000, 2005) output hypothesis which argues that rich input does not drive L2 learners beyond their current level of competence. As Lee and VanPatten (1995, p. 95) put it, whereas output practice "may help with fluency and accuracy in production, it is not responsible for getting the grammar into the learners' head."

The results have made a number of contributions to the ongoing debate on the effects of the TE and IF techniques when compared to TI and MO. First, the results indicate that the input-based instruction can be a successful instructional treatment, as it helps L2 learners to make form-meaning connections for grammar learning. The evidence collected in the present study has shown that the input-based instruction is not only a better instructional treatment compared to TI, but also to the MO instruction. Secondly, this study has made a contribution to the view that in L2 teaching, input practice can precede output practice. Research on the input-based

instruction has clearly indicated that this the input-based approach offers more instructional benefits than output practice. Lee and VanPatten (1995) have rightly argued that:

> TI, which is intended to cause a change in the developing system, is akin to put the cart before the horse when it comes to acquisition; the learner is asked to produce when the developing system has not yet had a chance to build up a representation of the language based on input data. (p. 95)

The results can be beneficial for L2 teachers who seek some effective ways to enhance consciousness and attention of their students. Being aware of the input-based and MO instruction techniques helps L2 teachers employ advantageous techniques to draw L2 learners' attention and raise their consciousness toward grammatical structures. Moreover, making input more salient to promote L2 learners' noticing (Smith, 1991) can be a practicable method to raise their grammatical awareness. L2 teachers can make the teaching material more salient by using frequency or enhancement. The input-based and MO methods can also be administered in other language areas and skills. It is, therefore, recommended that L2 teachers employ the techniques applied in the current study to help L2 learners pay a more careful attention to L2 learning process.

No study is devoid of limitations, and the current study is no exception. First, the participants were restricted to male students. Therefore, a replication of this study with female participants is suggested. Second, the current study was conducted on junior high school students. For future research, participants at tertiary level can be recruited. Moreover, because the scope of this study was limited to English grammar learning, investigating the impact of the input-based and MO techniques on the other aspects of L2 learning may, further, clarify the role of these instructional approaches to L2 learning. As this study concentrated on past simple and future simple tense, studying other grammatical structures can be illuminating. Also, to investigate the retention of L2 structures in different instructional conditions, future studies can include posttests with more time intervals. Finally, using other input-based and MO instruction techniques is recommended in order to gain a clearer picture of how these techniques contribute to L2 learning.

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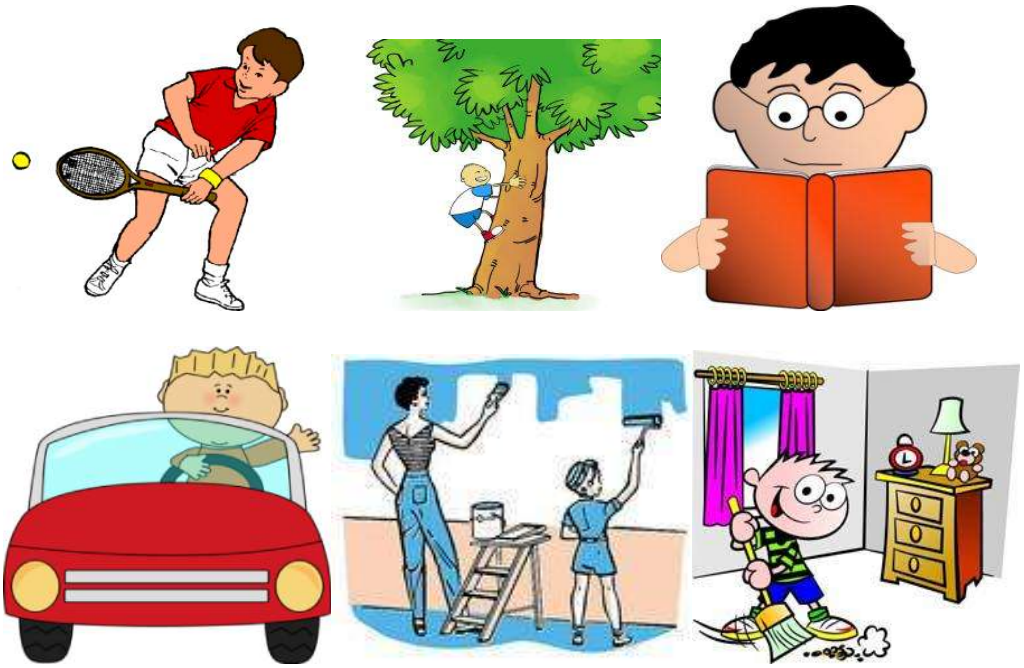
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Appendix A
Sample of Written Production Test (Past Simple)

Directions: *Look at the pictures and write a sentence describing what happened using one verb and one noun from the list provided.*

Pictures



Verbs	***Nouns***
drive	house
read	wall
play	car
clean	tennis
climb	book
paint	tree

Appendix B
Sample of Multiple-Choice Grammar Test

Directions: *Select the choice which best completes each sentence.*

1. Did Bob's father …… to the radio?
   a. listened b. listening c. listens d. listen
2. She …… pizza last night.
   a. eats b. will eat c. ate d. is eating
3. They …… next week.
   a. come back b. will come back c. came back d. have come back

4. Will you …… after school tomorrow?
   a. rest b. resting c. rested d. rests

Appendix C
Activity Sample for Meaning-Based Output Instruction

Directions: The first part of a sentence about your friend's holiday will be played. Change the verb in brackets to complete the sentences.

Activity A (sample)

1. …… (visit) his grandparents.
2. …… (enjoy) the journey.

Instructor script:

1. He went to Shiraz and he …… .
2. When he was there, he …… .

Activity B (sample)

- Step 1: Write at least five sentences (in the chart below) on how you spent your holiday.
- Step 2: Present your sentences to your partner. Your partner will also present his sentences to you.
- Step 3: Compare the sentences to find out who had the most fun holiday!

Myself	My friend

Appendix D
Activity Sample for Traditional Instruction

Directions: *Put the verbs provided in the simple past tense.*

1) I (visit) my uncle yesterday.
2) I (play) football with my friends last Friday.

Directions: *Put the verbs provided in the future simple tense.*

1) I (go) to Mashhad next week.
2) I (do) my homework tomorrow.