

## Effect of Direct Feedback on Field (In)dependent L2 Learners' Grammatical Accuracy in L2 Writing

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**Abstract** – Recent studies have illustrated that written corrective feedback (WCF) promotes L2 learners' grammatical accuracy; however, little is known whether individual differences mediate the effect of WCF. This study was an attempt to investigate the effect of direct WCF on field (in)dependent (FI/FD) intermediate L2 learners' grammatical accuracy. Participants were a convenient sample of 34 FI/FD intermediate L2 learners in a language institute in Iran. The FI/FD participants were randomly divided into two experimental and two control groups. Whereas the experimental groups received direct WCF in different settings, the control groups received no WCF. A pretest and a posttest were used to measure the FI/FD participants' knowledge of the L2 forms. ANOVA findings suggested that direct feedback resulted in the improvement of the FI participants' grammatical accuracy, though the FD participants did not significantly benefit from direct WCF. Findings provide insights into understating the way to include individual differences as conditions of L2 learning.

**Keywords:** written corrective feedback (WCF), direct WCF, Field (In)dependent (FI/FD)

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### 1. INTRODUCTION

Written corrective feedback (WCF) is referred to a feedback given on errors in the use of L2 that leads to improved accuracy in the short/long term in L2 learning (Bitchener, 2009). Direct WCF is defined as the provision of correct L2 forms by L2 teachers above L2 learners' linguistic errors (Bitchener & Knoch, 2010); it is one of the most popular types of WCF among L2 teachers and learners, which is probably due the fact that it is the fastest and easiest way to correct L2 learners' mistakes (Ferris & Roberts, 2001). Though a number of studies (e.g., Bitchener, 2008; Bitchener & Knoch, 2008; Chandler, 2003; Hashemnezhad & Mohammadnejad, 2012; Rahimi Domakani, Roohani & Abdollahian, 2010) provided evidence for the efficacy of direct WCF, the effect of direct WCF need to be tested when study designs include other mediating external/internal variables (e.g., attitude, learning style, level of proficiency) influencing the efficacy of WCF (Guenette, 2007). One of the variables, as argued by Sheen (2008), is the field (in)dependence (FI/FD) cognitive style that constitutes an important variable that may modify the effects of WCF on the development of L2 knowledge. Hence, this study was devoted to examine the efficacy of direct WCF along the moderating effects of FI/FD cognitive style.

## **2. REVIEW OF LITERATURE**

Cognitive style refers to the characteristic mode of functioning shown by individuals in their perceptual and thinking behavior (Morgan, 1997). However, different types of cognitive styles (e.g., FI/FD and leveling–sharpening) exist (Burnett, 2010), the most popular and widely examined cognitive style is FI/FD (Angeli & Valanides, 2004; Dragon, 2009; Hsu & Dwyer, 2004).

FI/FD cognitive style is based on the individual's reliance on the context to extract specific meaning (Witkin, Moore, Goodenough, & Cox, 1977). FI/FD learners are described along a continuum through GEFT (Witkin, Oltman, Raskin, & Karp, 1971) such that individuals with higher scores represent the FI cognitive style, whereas the lower scores show the FD cognitive style. Each learner on the GEFT is supposed to identify the simple shapes embedded in the complex patterns. FI learners, in the one hand, are considered to be more analytical, competitive, individualistic, task-oriented, internally referent, intrinsically motivated, hypothesis testing, self-structuring, linear, detail-oriented, and visually perceptive (Hall, 2000). Hu (1998) further highlighted that FI learners rely less on external clues than FD learners. FD learners, on the other hand, are group-oriented, global, sensitive to social interactions and criticism, extrinsically motivated, externally referential, not visually perceptive, nonverbal, and passive learners who prefer external information structures (Hall, 2000). Liu and Reed (1994) further maintained that FD learners are in more need of social input and external help in interpreting clues that are embedded in learning tasks.

In spite of a number of research studies indicating that FI learners are consistently related to better performance (Angeli & Valanides, 2004; Angeli, Valanides, & Kirschner, 2009; Burnett, 2010; Dragon, 2009; Hashemian & Fadaei, 2012; Hashemian, Jafarpour, Adibpour, 2015), to the best of the researchers' knowledge, almost no study has been done to investigate the efficacy of direct WCF along the moderating effects of FI/FD cognitive style. Therefore, the present study was an attempt to find answers to following questions:

1. Does direct WCF significantly affect Iranian FI/FD intermediate L2 learners' writing grammatical accuracy?
2. If yes, do Iranian FI/FD intermediate L2 learners benefit differently from direct WCF?

## **3. METHODOLOGY**

### **3.1. Participants, Instruments, and Procedure**

The current study employed a quasi-experimental design with a pretest, treatment, and posttest, working with four intact groups. A convenient sample of 34 L2 students in a language teaching institute in Iran participated in this study. They were chosen through Oxford placement test (OPT, Allen, 2004). The participants were Persian native speakers with the Persian sociocultural background, whose ages ranged from 18-32. Further, an experienced L2 teacher was invited to correct the errors during the treatment sessions.

The instruments (i.e., OPT, GEFT, pretest, and posttest.) were administered to the participants in different sessions. In the first step, the OPT was administered to them to

homogenize them in terms of their level of proficiency. The OPT results assured their homogeneity in terms of their level of proficiency. After selecting the 34 intermediate participants, the GEFT was given to intermediate L2 learners to classify them into FI/FD L2 learners. Then, the FI/FD participants were randomly assigned into direct WCF and control groups. In the next step, the pretest was administered. One week later, the treatment (i.e., WCF) was provided.

Motivated by recent studies (e.g., Bitchener & Knoch, 2008; Ellis, Sheen, Murakami, & Takashima, 2008; Sheen, 2007, 2011), providing solid theoretical reasons for believing that focused WCF is more effective, the current study limited the obligatory contexts for articles. Hence, the (in)definite articles were chosen as the L2 structures in this study. The treatment (i.e., direct WCF) involved indicating the location of the errors in the participants' writing tasks, after which providing the correct L2 forms or inserting the missing articles. Both (in)definite article errors were corrected (e.g., *A dog stole [a] bone from [a] butcher. He escaped with having [the] bone*). The WCF provided in brackets were written above the errors in the participants' writing tasks.

Four treatment sessions were held for the participants in each group. The control group participants were not provided with any WCF. The participants were required to write a 250-words essay per session. Care was taken to choose topics of equal difficulty for the four testing occasions. One week after the last treatment session, the posttest was administered. In order to calculate the reliability of the pretest and posttest, the FI/FD participants' scores were submitted to correlation. The obtained Cronbach's alpha magnitude was 0.84. The pretest, the posttest, and the treatment session tasks were adopted from IELTS tests, Writing, Section 2. To score the tasks, the correct use of articles was divided by the obligatory use of articles and the number of the errors made by the participants (Sheen, 2007).

#### 4. DATA ANALYSIS AND RESULTS

Descriptive statistics were estimated for the participants' the pretest and the posttest scores to gain a general view of the data. Descriptive statics are presented in Table 1:

**Table 1: Descriptive Statistics for All the Groups**

Group	Variable	<i>N</i>	<i>M</i>	<i>SD</i>
FI Direct	Pretest	9	29.33	3.240
	Posttest	9	34.00	2.784
FD Direct	Pretest	9	27.22	3.701
	Posttest	9	28.00	2.179
FD Control	Pretest	8	28.50	2.330
	Posttest	8	27.75	2.015
FI Control	Pretest	8	27.25	3.105
	Posttest	8	27.12	2.435

To answer the first research question and to see the effectiveness of the direct WCF on the grammatical accuracy of the FI/FD participants' writing ability, an ANCOVA was run. As the ANCOVA results manifested, the treatment was effective ( $F[3, 29] = 28.95, p \leq .05$ ).

Further, a post-hoc analysis was performed on the FI/FD participants' writing scores in the experimental and control groups to locate the differences between them. The significance value of the mean differences between the FD participants in the direct WCF group and the FI participants (6.000) in the direct WCF provided solid evidence that the FI participants who had received direct WCF outperformed the other groups. The results manifested that only the FI participants had benefited significantly from direct WCF, and the FD participants' gains as a result of direct WCF had not been significant (see Table 2):

**Table 2: Comparison of FI/FD Participants' Writing Scores for Direct Corrective Feedback**

(I) Group	(J) Group	Mean Difference (I-J)	Sig.
FD Direct	FI Direct	-6.000*	.000
	Control (FD+FI)	.500	.867
FI Direct	FD Direct	6.000*	.000
	Control (FD+FI)	6.500*	.000
Control (FD+FI)	FD Direct	-.500	.867
	FI Direct	-6.500*	.000

\* $p \leq .05$

## 5. DISCUSSION AND CONCLUSION

L2 researchers (e.g., Bitchener & Knoch, 2008, 2010; Chandler, 2003; Hashemnezhad & Mohammadnejad, 2012) have considered WCF as a prominent part of L2 learning; however, they have limited their focus on investigating the comparison between the different types of WCF and ignoring the potential effects of external/internal variables (e.g., beliefs, anxiety, attitude) that may modulate the efficacy of WCF. One of these factors is L2 learners' FI/FD cognitive style. Hence, this study was conducted to shed light on the extent to which direct WCF led to development in their writing grammatical accuracy. As the results manifested, only the FI participants' grammatical accuracy improved as results of direct WCF.

The results of this study that the FI participants benefited more as results of direct WCF is supported by previous research (e.g., Davey & Menke, 1989; Khalili Sabet & Mohammadi, 2013) in that such learners are more analytic than FD L2 learners. Hsu and Dwyer (2004) suggest that FD individuals have difficulty comprehending a large and complex amount of information. Further, Leader and Klein (1996) claim that FD individuals are less effective when using search and find strategies within database searches. This suggests that FD learners may be less competent in identifying underlying structures and important contents in the absence of relevant cues (Hsu & Dwyer, 2004). In fact, FD individuals have difficulty attending to and using nonsalient cues. According to cognitive information processing theory, if information is not attended to by L2 learners, learning does not occur (Kunnath, 2000). Additionally, it is believed that FI cognitive style is associated with better use of short-term memory (Hite, 2004). Thus, individual differences in terms of cognitive style are relevant to distinguish between L2 learners who are likely to benefit from direct WCF from those who are not. These provide

support for the findings of the current study that direct WCF only had a positive effect on the FI participants' writing grammatical accuracy.

The results of the present study along with previous studies (Angeli & Valanides, 2004; Angeli, Valanides, & Kirschner, 2009) suggest FI/FD cognitive style is prominent. The findings suggest that if L2 learners' cognitive style is incongruent with the type of WCF, L2 learners' performance won't be the best possible. In other words, well-designed instruction does not always lead to improvement in performance for all learners. In a nutshell, as the results of this study indicated, whereas the FD/FI participants were all presented with the same type of WCF, the FD participants were not able to improve their grammatical significantly. In this light, it can be implied that the Iranian FI/FD intermediate learners benefited differently from direct WCF. As a conclusion, the design and development of effective instructional materials may benefit tremendously from the awareness of the FI/FD cognitive style as it bears significance in the process of L2 learning and mediate the L2 leaning process.

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