

## The Relationship between Metalinguistic Knowledge (Syntax) and Iranian Intermediate EFL Learners' Writing Performance

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### **Abstract**

Metalinguistic knowledge is developed to help students cope with daily multiple tasks. Therefore, the importance of students' Metalinguistic Knowledge for multiple tasks seems evident. On the other hand, writing is one of the crucial language skills. There is no doubt that writing is the most difficult skill for L2 learners to master. Yet more Metalinguistic Knowledge can enhance student interaction in the EFL classroom and raise students' self-confidence. In the present study an attempt was made to provide a link between Metalinguistic Knowledge and writing tasks. In other words, this study intended to find if the level of Metalinguistic Knowledge can have any significant impact on writing of Iranian EFL learners, to this end 100 male and female Iranian learners were chosen. These students all were studying English as a foreign language at English language institutes and their age ranged between 23 and 28. The writing section of an Oxford Placement Test (OPT) was used in order to measure the learners' writing ability. Needless to say, OPT is a standardized English language test and its reliability and validity are guaranteed. Then Metalinguistic Knowledge test is an essay-type test designed to measure the learners' knowledge of specific grammatical structures. The results showed there was no significant relationship between the performance of male and female learners with different levels of Metalinguistic in writing classes.

**Keywords:** metalinguistic knowledge, writing performance, Oxford Placement Test

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### **I. INTRODUCTION**

In the history of language learning and teaching, there have been changes over teaching grammar. Grammar is known as a set of rules that describes how words and group of words can be arranged to form sentences in a particular language. The grammar of English

involves all the rules that govern the formation of English sentences, and that is exactly what learners of English want to know (Cowan, 2008). In deductive grammar teaching, learners are given rules and statements about grammar up front and asked to apply them. Deductive method is programmed from general concept to specific ones. Inductive reasoning is common in science subjects. Deductive learning is the process of learning and reasoning from general principles to detailed facts. It is common in mathematics. In inductive grammar teaching, learners are not given the rules up front, rather they are asked to try different things and see what works and what does not. Through experimentation, learners figure out the grammatical rules on their own. Inductive learning is the process of learning and reasoning from detailed facts to general principles.

In explicit grammar teaching, the rules are explained to learners, or the learners are directed to find the rules by looking at linguistics examples (Cowan, 2008). On the other hand, implicit teaching “makes no overt references to rules or forms” (Doughty, 2003, p. 263). The question rises in the mind that how grammar should be taught in order to be effective and help learners to pay attention to those rules.

These foundations demonstrated that human learning can take place implicitly, explicitly, or, because we can communicate using language, it can be influenced by declarative statements of pedagogical rules (explicit instruction). These modes of learning apply to differing extents in all learning situations. There are at least some mutual influences in their development too. Consider, for example, that from implicit to explicit knowledge: although in native language acquisition implicit learning is primary, the development of self-awareness allows reflective examination, analysis and re-organization of the products of implicit learning, resulting in re-description at a higher level and the formation of new independent and explicit representations. Thus an older child can make a good stab at explaining how to form a plural in English because they have realized the relevant metalinguistic insight of “add –s” from observing themselves forming plurals in this way (Bialystok, 1982). The central issue of the interface question is just how much influence there is in the reverse direction, how much do explicit learning and explicit instruction influence implicit learning, and how can their symbiosis be optimized? Subsequent research took up this theme, though now as a better-informed interdisciplinary collaboration (N.C. Ellis, 1994).

## **II. LITERATURE REVIEW**

### *A. Metalinguistic Knowledge and L2 Performance*

Over the past two decades, the literature on second language acquisition (SLA) has witnessed much theoretical controversy about the relationship between metalinguistic knowledge (i.e., explicit and verbalizable knowledge about L2grammar) and L2acquisition and performance. Some SLA theorists see little use for explicitly learned knowledge in performance, claiming that neither competence nor performance in an L2can be affected in any nontrivial way by grammar teaching and the so-called pseudo grip of metalinguistic knowledge (Krashen, 1982; Paradis, 1994; Schwartz, 1986). Others posit that knowledge of

an L2 develops from implicit to explicit states and that different types of knowledge are involved to different extents in different domains of language use (Bialystok & Ryan, 1985; Birdsong, 1989). Still others argue that L2 learning can begin with explicit rules (i.e., declarative knowledge) and that such knowledge can become increasingly available for rapid use in spontaneous performance through continual proceduralization and automatization (DeKeyser, 1997; Hulstijn, 1990; Johnson, 1996). Finally, there are also SLA theorists who contend that metalinguistic knowledge is not directly involved in communicative output but can facilitate the development of implicit knowledge (Ellis, 1994, Sharwood Smith, 1991).

In contrast to this theoretical pluralism, empirical research on the role of metalinguistic knowledge in L2 production is rather limited (see Sharwood Smith, 1994).<sup>1</sup> Moreover, as the literature review in the following section shows, empirical inconsistency is manifest in the small body of extant research. There is an apparent need for more empirical work that systematically investigates the effects of metalinguistic knowledge on L2 performance and factors that facilitate or inhibit L2 learners' access to their metalinguistic knowledge in real-time production (DeKeyser, 1997; Schmidt, 1994). Firm empirical evidence from this line of research can have important theoretical and pedagogical implications. The present study aims to contribute such evidence by investigating (a) whether instructed learners' metalinguistic knowledge about an L2 is involved in their performance in the language, and (b) what major psychological constraints there are on real-time access to such knowledge in L2 performance.

Seliger (1979) was an early study that explicitly tested intuitive claims about the functions of metalinguistic knowledge in performance. The researcher elicited, through a naming task, uses of the allomorphs of the indefinite article (a[n]) from monolingual and bilingual children as well as adult learners of English and then asked them to give the rule underlying their choice of the two forms. No relationship was found between the correct or anomalous rules verbalized by the subjects and their accuracy in using the allomorphs. Based on this result, Seliger speculated that explicit rules could not be involved in output but might function as "acquisition facilitators" (p. 369). Similar results were obtained in another study (Grigg, 1986) that examined the effects of task, time pressure, and rule knowledge on English L2 learners' use of several morphological structures. Grigg compared the learners' production to their ability to state the rules for the structures but failed to find any significant effect of rule knowledge on use. In a more recent study, Renou (2000) asked advanced French L2 learners to correct grammatical errors and provide the rules that the corrections entailed. Little difference was found in L2 proficiency between those who could only correct the errors and those who could both correct the errors and provide the rules.

Bialystok (1979) examined adult French L2 learners' performance on a grammaticality judgment task under two time conditions (spontaneous vs. delay). Multilevel analyses revealed that time was not a significant factor when responses involved only judging the grammaticality of the test sentences. However, there was a significant interaction between time and response in favor of the delay situation when responses were scored for correctly identifying the error in a test sentence and selecting from a list of grammatical rules the exact rule violated by the identified error. Based on the assumption that performance drawing on

implicit knowledge would remain stable under different time conditions, Bialystok contended that implicit knowledge was used to decide grammaticality, though more detailed analysis of errors involved explicit knowledge.

Several studies have come up with results different from, or even contrary to, those just discussed. Hulstijn and Hulstijn (1984) assessed adult L2learners' explicit knowledge of two Dutch word-order rules and examined their output under four conditions set up by manipulating two variables: attention to information or grammar and presence or absence of time pressure. They found that learners with explicit knowledge used the target structures significantly more accurately across the four conditions than did those learners without such knowledge. However, "the learners lacking explicit knowledge did not profit less than the learners with explicit knowledge from the absence of time pressure and from a focus on grammar" (p. 39). Green and Hecht (1992) had 300 German learners of English correct 12 errors commonly committed by German learners and state the rules that they believed had been violated. The researchers found that the learners as a group nearly always produced the proper correction when they had a correct rule available, though 43% of the total proper corrections were made when incorrect rules or no rules were given. In a small scale study involving beginning and intermediate learners, Sorace (1985) also investigated the relationship between metalinguistic knowledge and use of specific structures on different tasks and found a "highly significant correlation between knowledge and use in non-beginners" (p. 250). In a more recent study, Hu (1999) assessed the metalinguistic knowledge that L2learners had about six target structures and examined the accuracy with which they used these structures on spontaneous and metalinguistic production tasks. The results indicated that the learners were consistently more accurate when they had explicit 350 Guangwei Hu knowledge of the target uses than when they had only some implicit knowledge. Furthermore, their accuracy rates in the presence of explicit knowledge varied significantly from task to task, and there was an interaction between types of knowledge and task demands.

Although the above studies attested to more accurate production in the presence of explicit knowledge, the results were interpreted differently. Whereas Green and Hecht (1992, p. 178) interpreted their results as suggesting that the learners operated "largely by implicit rules, which very possibly had been facilitated by explicit rules," Hulstijn and Hulstijn (1984) saw their findings as evidence for the independence of executive control and metalinguistic awareness and concluded that grammatical errors were "a function of processing constraints and explicit knowledge" (p. 39). Both Hu (1999) and Sorace (1985), on the other hand, interpreted their respective data as suggesting that metalinguistic knowledge could be applied in L2production and that its function was more than limited monitoring. A notion frequently invoked in discussing and explaining the inconsistent results of research on metalinguistic knowledge is that different tasks may tap different types of knowledge (Bialystok, 1982; Krashen, 1982). Its intuitive plausibility notwithstanding, this notion, as will become clear in the following section, cannot fully resolve certain empirical inconsistencies.

### **III. METHODOLOGY**

#### *A. Participants*

To conduct the current study, a total of 100 Iranian EFL learners consisting of 64 female and 36 male students were invited to participate. The participants aged from 23 to 28. The average age of the participants was about 25. All of the participants were learning English as their foreign language. The participants were at the intermediate level from Language Institute in Hamedan. The participating learners have been learning English for about 6 years and have reached the intermediate level. Regardless of the number of participants that the practitioner tried to get they involved in the general English proficiency test for a convenient sampling. As mentioned earlier the participants have been learning English for some years in the English language institute. Beside that they had the opportunity of studying English at school or at university so they had a considerable experience of exposing to English and as the result it is expected that they have developed some basic writing skills after few years. Hence, it seems reasonable to choose learners at this level of English proficiency as the participants of this study.

#### *B. Instruments*

The instruments used for data collection consisted of an English writing test and a metalinguistic knowledge test. The detailed description of instruments is as follows.

#### **1. English Writing Test**

Writing section of Oxford Placement Test (OPT) was used in order to measure the learners' writing ability. Needless to say, OPT is a standardized English language test and its reliability and validity are guaranteed.

In writing section, participants were supposed to write a topic-based essay with maximum 150 words. The topic was about returning from a two-week holiday and writing an e-mail to your friend telling him/her about the holiday. The information about the journey, residency should be provided. Four criteria were considered in order to examine the writing task:

- Content (maximum 4 points): 1 point for each point included and 1/2 point if part of a point is included but not developed.
- Form (maximum 2 points): 2 points for correct format, 1 point if only part of format is used and 0 points if format is not used at all.
- Range of vocabulary and structures (maximum 2 points): 2 points for using a good range of vocabulary and structures, 1 point for using a reasonable range of vocabulary and structures and 0 points for using a poor range of vocabulary and structures.
- Accuracy (maximum 2 points): 2 points for accuracy over 80%, 1 point for accuracy between 70 and 80 %.

Totally, writing test carries 10 marks. The writing test was corrected and scored by three scorers. The mean of three sets of scores were considered as final score of the participants.

## **2. Metalinguistic Knowledge Test**

Metalinguistic knowledge test is an essay-type test designed to measure the learners' knowledge of specific grammatical structures. It consists of 4 questions each of which carries 5 marks. The items are as follow:

1. Please elaborate simple present and give an example.
2. Please elaborate present continuous and give an example.
3. Please elaborate simple past and give an example.
4. Please elaborate present perfect and give an example.

Four English language grammatical structures (i.e., simple present, present continuous, simple past and past perfect) were chosen for investigation. Two criteria were used in selecting target structures for investigation. First, the target structures should be those that the participants had been repeatedly exposed to and explicit instructed on, so that they were reasonably expected to have developed relevant metalinguistic knowledge. Second, each of the target structures should be complex enough to require a number of rules to describe its various uses. The participants had received instruction in those structures.

The participants were asked to explain the grammar rules and give an example to find out if they know the structures or not. They were required to respond in English or Persian but the examples should be in English.

### *C. Data Collection*

A structured procedure was adapted in order to investigate the relationship between Iranian EFL learners' metalinguistic knowledge and their writing ability. Prior to giving the instruments, the participants were briefly instructed about the tests. All stages of study were conducted during normal class schedule in August and September 2014. To avoid transferring the content of research from the participants to those who took part later, the participants were selected from two different language institutes.

The first step of the study was the administration of metalinguistic knowledge test. The participants were required to answer this test in 20 minutes. The answer sheets were collected and the learners were prepared to do writing task.

After a brief explanation about the writing test, all of the participants were asked to employ the target structures (i.e., simple present, present continuous, simple past and past perfect) in their compositions. Learners freely wrote their compositions and submitted them to the instructor. No feedback was provided during the administration of the writing test.

All the procedures of data collection were done without any major problem and they proceeded in the predicted order. All the participants were present in all phases of the study. Furthermore, to care for the tenets of the research, no one of the test papers during different phases of study was given back to the participants, and no information about the content of study was transpired before administering it.

In order to address the research question of the study, data collection was performed through a correlational ex-post facto design. In this study, the quantitative analysis helped the researcher to explain the relationship between EFL learners' perceived metalinguistic knowledge and their writing ability.

In this design, the relationship between one independent variable, i.e., metalinguistic knowledge and dependent variable, i.e., writing ability were studied; these variables were based upon subject's responses to two tests. To shed some light on the investigation of role of the metalinguistic knowledge and its relationship with learners' writing ability in Iranian EFL context, the participants were requested to select the most appropriate answers to the questions.

#### IV. RESULTS AND DISCUSSION

##### *A. Descriptive Statistics*

The descriptive statistics including minimum and maximum of scores, mean and standard deviation of the learners' performance on metalinguistic knowledge test is provided in Table 1.

**Table 1: Descriptive statistics of the learners' performance on metalinguistic knowledge test**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Metalinguistic Knowledge Test	100	5.0	20.00	13.0200	4.75879
<b>Valid N (listwise)</b>	<b>100</b>				

The descriptive statistics of the learners' performance on writing test rated by three scorers are presented in Table 2.

**Table 2: Descriptive statistics of the learners' performance on writing test**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Writing Test (Scorer 1)	100	3.00	9.00	5.7800	1.66715
Writing Test (Scorer 2)	100	3.00	9.00	5.6600	1.58414
<b>Writing Test (Scorer 3)</b>	<b>100</b>	<b>3.00</b>	<b>9.00</b>	<b>5.6800</b>	<b>1.58834</b>

*B. Analysis of the Obtained Scores*

In order to ensure that there is no significant difference among the scorers regarding their assigned scores, a one-way ANOVA was performed. The results are shown in Table 3.

**Table 3: ANOVA between scorers' writing scores**

Scorers					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.827	2	.413	.159	.853
Within Groups	773.360	297	2.604		
<b>Total</b>	<b>774.187</b>	<b>299</b>			

The results showed that there is no significant difference ( $F = .15, p > .05$ ) among scorers regarding the scores they assigned to the writing test.

In order to check the inter-rater reliability of the scores on writing test, a Pearson product moment correlation was performed. The results are shown in Table 4.

**Table 4: Inter-rater reliability of the writing test**

Correlations					
		Writing Test (Scorer 1)	Writing (Scorer 2)	Test	Writing Test (Scorer 3)
Writing Test (Scorer 1)	Pearson Correlation	1	.954**		.961**
	Sig. (2-tailed)		.000		.000
Writing Test (Scorer 2)	Pearson Correlation	.954**	1		.912**
	Sig. (2-tailed)	.000			.000
Writing Test (Scorer 3)	Pearson Correlation	.961**	.912**		1
	Sig. (2-tailed)	.000	.000		
	N	100	100		100

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The results of Pearson correlation indicated that the writing scores of EFL learners have a high and significant inter-rater reliability ( $r_{1, 2} = .95, r_{1, 3} = .96, r_{2, 3} = .91, p < .01$ ). Therefore, the inter-rater reliability of writing scores are guaranteed.

The mean (arithmetic average) of three series of writing scores was calculated and was considered as EFL learners' writing scores in this study. Table 5 provides the descriptive statistics of this test.

**Table 5: The descriptive statistics of writing test**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Writing	100	3.00	9.00	5.7067	1.58222
<b>Valid N (listwise)</b>	<b>100</b>				

In order to prove the normality of the scores of writing and metalinguistic knowledge test, another statistical procedure, namely, one sample Kolmogorov-Smirnov test was performed. The results are presented in Table 6.

**Table 6: One-Sample Kolmogorov-Smirnov Test of writing and metalinguistic knowledge test**

		Metalinguistic Knowledge Test	Writing
N		100	100
Normal Parameters <sup>a,b</sup>	Mean	13.0200	5.7067
	Std. Deviation	4.75879	1.58222
Most Extreme Differences	Absolute	.191	.084
	Positive	.114	.080
	Negative	-.191	-.084
Kolmogorov-Smirnov Z		1.913	.835
Asymp. Sig. (2-tailed)		.901	.488
a. Test distribution is Normal.			
b. Calculated from data.			

As the Table 6 shows, the most extreme differences between the scores is not significant. The measured significance level for metalinguistic knowledge and writing scores were higher than the assumed level of significance (i.e., 0.05); thus, it can be concluded that there was no significant difference between the observed distribution of selected scores of metalinguistic knowledge and writing and the scores are normally distributed.

### *C. Testing the Hypothesis of the Study*

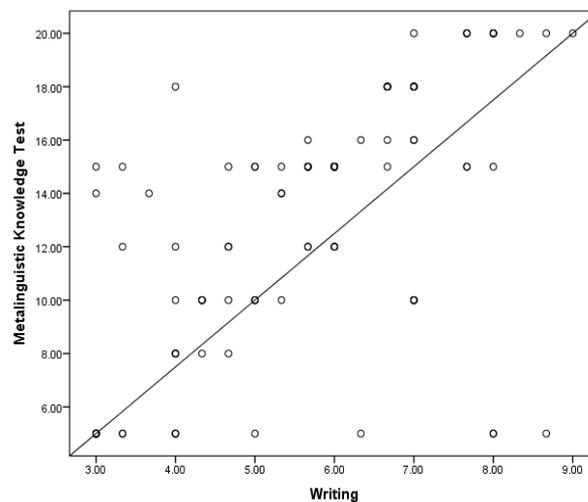
The pre-conditions for testing the hypothesis of the study were met. In order to verify the hypothesis of the study in finding whether there is any significant relationship between EFL learners' metalinguistic knowledge and their writing ability, a Pearson product moment correlation was performed. The results are shown in Table 7.

**Table 7: Pearson correlation between EFL learners' metalinguistic knowledge and their writing ability**

Correlations			
		Metalinguistic Knowledge Test	Writing
Metalinguistic Knowledge Test	Pearson Correlation	1	.591**
	Sig. (2-tailed)		.000
	N	100	100
Writing	Pearson Correlation	.591**	1
	Sig. (2-tailed)	.000	
	N	100	100

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The results indicated that there is a positive, moderate and significant relationship between Iranian EFL learners' metalinguistic knowledge and their writing ability ( $r = .59, p < .05$ ). In other words, the more Iranian EFL learners possessed metalinguistic knowledge, the more their writing ability was. Thus, the null hypothesis of the study was not accepted. Figure 1 shows the scatterplot of the relationship between learners' metalinguistic knowledge and their writing ability.



**Figure 1: Scatterplot of the relationship between learners' metalinguistic knowledge and their writing ability.**

## V. CONCLUSION

Teachers make a significant difference in the lives of students and the impact lasts long after they leave the classroom. The impact of infographic provides interesting facts from the research on how teachers can impact the lives of students. The remarkable shift regarding

grammar learning as an active component of second/foreign language learning persuaded majority of researchers to take the new attitude in which the learner is more active and engaged in learning process. The purpose of this study was to investigate the relationship between Iranian EFL learners' metalinguistic knowledge and their writing ability. The results of the study indicated that the learners' higher knowledge of grammatical structures led to higher writing ability. Participating in a class in which metalinguistic instruction is predated helped learners improve their writing ability.

The results of this study proved that teaching grammar items would lead to better writing quality among EFL learners. Metalinguistic instruction increased the motivation of learners to improve their grammatical knowledge as they experienced different ways to learn vocabulary items. In addition to the fact that infographic instruction was not innovative for the participants of the study, it could provide opportunities for them to be more successful in their writing.

To conclude, this study might have clarified some issues attributable to metalinguistic knowledge in addition to its relationship with learners' writing ability. However, it might also have given rise to more issues regarding the matter.

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