

# THE EFFECT OF EXPLICIT INSTRUCTION AND ERROR CORRECTION ON LEARNERS' GRAMMATICAL ACCURACY: IN THE CASE OF JAPANESE LEARNERS OF ENGLISH AS A SECOND LANGUAGE

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**Resumen:** Este estudio afirma que la instrucción explícita (EI) con la corrección de error explícito (EEC) pueden ser eficaces para adquirir elementos lingüísticos que no se hayan enseñado lo suficiente y que mayormente expresen significado léxico. Por otra parte, EI con EEC no pueden ser eficaces para los elementos lingüísticos que mayormente expresen funciones gramaticales formales, que los aprendices ya conocen muy bien. El estudio asume que el orden linear fijo para algunos elementos (e. g., morfemas gramaticales) no es influenciado por estímulos externos (i. e. , EC con EEC): como L1, el proceso de la adquisición de la L2 no es al azar, sino ordenado. Sin embargo, el estudio no necesariamente niega el rol de la instrucción explícita del profesor para cada uno de los aspectos de la adquisición de la L2. El estudio también afirma que EI y EEC son más eficaces para aquellos aprendices quienes tengan sus niveles de competencia general de la L2 altos. Apoyamos estas suposiciones presentando tres experimentos con respecto a la adquisición de los sujetos de la oración y los morfemas gramaticales en inglés por japoneses adultos, aprendices del idioma Inglés.

**Palabras clave:** Japoneses estudiantes de inglés, instrucción explícita, corrección explícita de errores, sujeto sentencial, morfemas gramaticales

**Abstract:** This study claims that explicit instruction (EI) with explicit error correction (EEC) can be effective for acquiring linguistic items which mainly convey lexical meaning, and have not been taught enough. On the other hand, EI with EEC cannot be effective for linguistic items which mainly convey formal grammatical functions, which are already well known to the learners. The study assumes that the fixed linear order for some grammatical items (e.g., grammatical morphemes) is not influenced by external stimuli (i.e., EC with EEC): Like L1, the L2 acquisition process is not random, but orderly. However, the study does not necessarily deny the role of teacher's explicit instructions for every aspect of L2 acquisition. The study also claims that EI with EEC are more effective for those learners whose general L2 proficiency levels are high. We support these assumptions by presenting three experiments concerning the acquisition of English sentential subjects and grammatical morphemes by Japanese adult learners of English.

**Key-words:** Japanese learners of English, explicit instruction, explicit error correction, sentential subject, grammatical morphemes

## 1. INTRODUCTION

The present study will claim that a teaching method of combining explicit instruction (EI) with explicit error correction (EEC) from teachers can be effective on some grammatical items, but not on others. That is to say, EI with EEC can be effective (i) for linguistic items which mainly convey lexical meaning and have not been taught enough, and (ii) for learners whose general second language (L2) proficiency levels are high. On the other hand, EI with EEC cannot be effective (i) for linguistic items which mainly convey formal grammatical properties and have already been well known to the learners, and (ii) for learners whose general L2 proficiency levels are not high. In order to support these assumptions, we will present three experiments concerning the acquisition of English sentential subjects and grammatical morphemes by Japanese learners of English (JLEs).

## 2. THEORETICAL BACKGROUND

### 2.1 Explicit instruction (EI) with explicit error correction (EEC)

EI draws attention to specific linguistic rules in a clear manner to have L2 learners consciously study particular grammar items. Thus, learners are expected to learn L2 rules consciously and then try to apply them in their L2 comprehension and production. On the other hand, EEC occurs in response to learners' production errors. It gives learners negative evidence, which shows what is not possible in the target language. Whether or not EI with EEC is effective has been debated for years (Bitchener, 2012; Ferris, 1999; Truscott, 1996). Some researchers claim that EI with EEC can be ineffective for L2 acquisition, and does not precede L2 learner's language proficiency. Others argue that it is helpful and can promote learners' L2 ability (Ellis, Loewen & Erlam, 2006; Truscott, 2001, 2007).

Exposure to linguistic input of a target language is necessary for any L2 learners to develop their L2 grammatical knowledge. However, some grammatical rules and properties are so complex that it seems to be quite difficult for L2 learners to acquire them subconsciously only from the input they receive in the classroom. Given this, it should be beneficial for L2 learners to be informed about not only grammatically correct forms but also ungrammatical forms by pointing out grammar errors in their production.

### 2.2 The acquisition of sentential subjects

The acquisition of sentence-initial subjects in English is considered as one of the complex grammatical items for JLEs (Kuribara, 2006; Shibata, 2006). According to these previous studies, JLEs often produce errors shown in (1a), (1c) and (1e) below. The sentence in (1a) is ungrammatical in English since the determiner phrase (DP) in the subject position (i.e., *our school*) cannot be regarded as the subject of the sentence, but rather as the object. The DP *our school* has moved from the object position to the sentence-initial position to become a topicalized noun, which makes it look like a subject. On the other hand, a Japanese equivalent sentence shown in (1b) is grammatical. In (1c) and (1e), a topicalized noun is moved from the prepositional phrase and adverbial phrase respectively. Japanese equivalent sentences for these English sentences are shown in (1d) and (1f). Both of them are grammatical in Japanese.

(1) Topicalized Noun Phrase<sup>i</sup> + Null Subject + V+ (Object/PP/AdvP) Structure

- a. \*Our school cannot enter on Sunday. (From object noun)  
(= We cannot enter our school on Sunday.)
- b. Watashitachi-no gakkoo-wa nichiyooobi-ni haire-ma-sen.  
we -Gen school-Top Sunday -on cannot enter
- c. \*This station cannot use a commuter pass. (From prepositional phrase)  
(= You cannot use a commuter pass in this station.)
- d. Kono eki -wa teikiken -ga/o tsukae-nai.  
this station-Top commuter pass-Nom/Acc cannot be used
- e. \*Last year didn't snow much. (From adverbial phrase)  
(= It didn't snow much last year.)
- f. Sakunen-wa yuki -ga amari furanakat-ta.  
last year-Top snow-Nom much did not fall

This discrepancy between the two languages suggests that JLEs tend to rely on Japanese syntactic structures, i.e., they transfer their first language (L1) to L2: A topic element can be located in the sentence-initial position in Japanese, whereas a subject is in that position in English. To briefly conclude, one of the major differences in syntactic structures between Japanese and English concerning sentential subjects is that Japanese is a topic-prominent language, while English is a subject-prominent language (Li & Thompson, 1976).

There is another property which we should focus on when we discuss the acquisition of sentential subjects. That is, English does not allow a null-subject, whereas Japanese does. The sentence in (2a) is grammatical in Japanese, where (2b) is ungrammatical in English since the subject of the sentence is not overtly realized.

- (2) a. Mainichi gakkoo -e iku  
every day school-to go  
b. \* $\emptyset$  go to school every day.  
(= I go to school every day.)

Following the linguistic properties described above, JLEs need to learn that:

- (3) a. Unlike Japanese, English requires non-null subjects.  
b. Unlike Japanese, English does not allow non-thematic topical subjects.

Interestingly, a lot of JLEs' acquisition data in Shibata (2006) and Nawata & Tsubokura (2010) have demonstrated that JLEs have little difficulty in learning the property of (3a), but not that of (3b). They mistakenly tend to regard Japanese topicalized nouns as English subjects (Kuribara, 2004).

This inadequate acquisition is plausibly ascribed to the fact that no explicit information is available for JLEs to subconsciously notice the property in (3b). It may be difficult for them to notice the differences between subjects and topics. This leads to the assumption that EI with EEC should play a crucial role to have JLEs notice and comprehend the difference between the two grammatical items. Then, JLEs may be more likely to distinguish subjects from topics, whose task is quite hard for them solely by using linguistic input received in the classroom.

### 2.3 The acquisition of grammatical morphemes

Not only in the case of L1 acquisition, but also in L2 acquisition, it has long been said that there is systematicity in the growth of linguistic knowledge across different learners. L2 learners with different L1 backgrounds and/or under different learning conditions of exposure—naturalistic versus classroom—can go through quite similar stages of development (Towell & Hawkins, 1994; White, 2003).

Stimulated by the L1 acquisition studies of grammatical morphemes, similar acquisition order studies began in L2 acquisition (Bailey, Madden, & Krashen, 1974; Dulay & Burt, 1973; Dulay, Burt, & Krashen, 1982, among others). These L2 morpheme accuracy studies have found that even L2 learners show quite similar accuracy orders regardless of the learners' learning backgrounds, although there were some differences among them because of L1 transfer. The morpheme studies conducted in EFL classrooms in Japan have found a steady accuracy order for four verb-related morphemes as shown in (4): progressive -ing (ING), verb irregular past (IRP), verb regular past (RP) and 3rd person singular present -s (3PS) (Shirahata, 1988; Terauchi, 1994, among others).

(4) ING > IRP > RP > 3PS (easy > difficult)

Since determining the cause of the morpheme accuracy order is not the main purpose of this paper, we will just mention that there is a fixed accuracy order of these four verb-related grammatical morphemes, at least, for JLEs, and 3PS is the most difficult. In this paper, we will demonstrate that EI with EEC cannot change this morpheme accuracy order and also have little effect on accelerating the proficiency rate of 3PS by JLEs.

To sum up, we hypothesize that the accuracy order of morphemes is so strongly fixed that this order cannot be changed by any external stimuli such as EI with EEC. Even when explicit instruction is focused on 3PS, JLEs cannot perform better than before the treatment is applied. Longitudinally, they will remain at the same accuracy level although their accuracy level may temporarily appear higher immediately after explicit instruction.

## 3. EXPERIMENT

### 3.1 Research hypothesis

Our hypothesis is that EI with EEC can be effective on the acquisition of sentential subjects because the subject conveys lexical meanings and JLEs have not learned linguistic differences between subjects and topics when they were in high school. On the other hand, EI with EEC is not effective on the acquisition of verb-related bound morphemes because their roles are to convey grammatical functions, and JLEs have already known the rules well.

Moreover, since EI with EEC can work well on L2 learners with higher English proficiency than those with lower proficiency, in terms of the acquisition of sentential subjects, a higher proficiency group probably could achieve and maintain higher scores than a lower proficiency group. This is because L2 learners with high proficiency are the ones who should be able to follow teachers' instructions in the second language. On the contrary, lower-level JLEs may not associate what they learn about sentential subjects with other related linguistic items such as sentence structures, functional and lexical words necessary for producing grammatical sentences with proper sentence subjects.

### 3.2 Grammatical items studied

The present study focuses on the two linguistic items, sentential subjects for Experiment 1 and bound morphemes related to verbs for Experiment 2.

### 3.3 Experiment 1: sentential subjects

#### 3.3.1 Participants for Experiment 1

Participants for Experiment 1 were 96 first-year JLEs specializing in a variety of subjects at a university in Japan. They were divided into an Experimental Group and a Control Group. Furthermore, the Experimental Group was divided into two subgroups, Group A and Group B, depending on their TOEIC scores. Thus, participants who obtained 550 to 700 scores on TOEIC randomly went into Group A (n=38) or Control Group (n=37). They were considered as an intermediate proficiency group. Participants whose TOEIC scores were from 300 to 400 belonged to Group B. They were regarded as a low proficiency group.

#### 3.3.2 Treatments (Explicit instruction)

EC with EEC for sentential subjects were given three times to the JLEs in the Experimental Group. In the first session, researchers explicitly explained why the English sentences such as (5) were ungrammatical, focusing on the role of overt noun phrases in the preverbal position in the two languages.

(5) a. \*What did (ø) do last night?

Yuube (ø) nani-o shi-ta -no? (Japanese)  
last night (ø=you) what-Acc do-PAST-Q

b. \*(ø) Studied math.

(ø) suugaku-o benkyo-shi-ta. (Japanese)  
(ø=I) math -Acc study -do -PAST

Then, with the sentences from (6) to (8), the difference between subject and topic was explained, focusing on the Japanese topic marker *wa* and the nominative-case marker *ga*. In particular, the notion and function of topicalization were clearly explained and it was emphasized that the copula *be* has no relationship with the topic marking.

(6) a. Taro-ga Hanako-o tatai-ta. (Eng. Taro hit Hanako.)  
Taro-Nom Hanako-Acc hit -PAST  
b. Taro-wa Hanako-o tatai-ta. (Eng. Taro hit Hanako.)  
Taro-Top Hanako-Acc hit -PAST

- (7) \*Today is busy. (Eng. I am busy today.)
- (8) a. My brother gave this watch to me.  
b. \*This watch my brother gave to me.  
c. \*This watch was my brother gave to me.

The second session followed a week later. The first twenty minutes were spent on a review of the points covered in the previous session, and then the participants were asked to judge the grammatical accuracy of sentences with a topic phrase. The last session was held a week after the second treatment. Following the 15-minute review, another exercise on the grammatical accuracy was provided with EEC.

### 3.3.3. Grammaticality judgment task for Experiment 1

The participants completed grammaticality judgment tasks for the pretest, immediate posttest and delayed posttest after the three consecutive treatment sessions. The posttest was given a week after and the delayed posttest was provided 36 weeks after the last treatment session. The test included four targeted sentences with 22 distractors as shown in (9).

- (9) Examples of sentences used in the grammaticality judgment task
- a. \*The lecture could not understand.  
(= I could not understand the lecture.)
- b. \*Baseball enjoyed very much.  
(= We enjoyed baseball very much.)
- c. \*This shop can choose my favorite toppings.  
(= I can choose my favorite toppings at this shop.)
- d. \*Yesterday went to Tokyo with my mother.  
(= I went to Tokyo with my mother yesterday.)

The participants were asked to provide the correction and reasons why they judged a sentence ungrammatical when they answered that the sentence was ungrammatical. A similar test format was adopted with some changes of the content words in order to avoid a repetition effect. The rejection of an ungrammatical sentence with an appropriate correction was considered correct, whereas the acceptance of an incorrect sentence or the rejection of a sentence with the wrong reason counted as a faulty judgment.

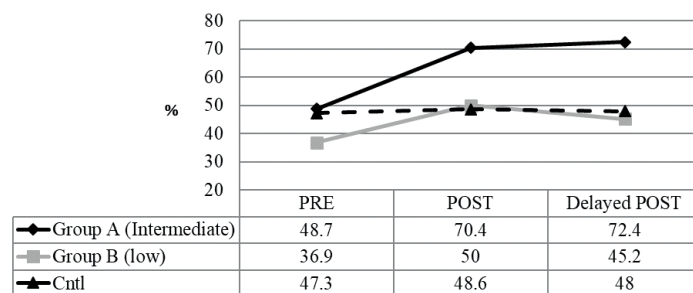
## 3.4 Results of Experiment 1

The results are shown in Table 1 and Figure 1. The data were submitted to a repeated measures ANOVA and Bonferroni post-hoc tests. Let us first discuss the results of Group A (intermediate proficiency learner group). The statistical results reveal that mean scores of both immediate posttest (70.4%) and delayed posttest (72.4%) are significantly higher than that of pretest (48.7%) ( $p = .001$  and  $p = .001$ , respectively). This means that our explicit instruction with explicit corrective feedback was effective and was able to maintain its effect for quite a long time period (for 36 weeks).

As for Group B (low proficiency learner group), the mean score for the immediate posttest (50.0%) is significantly higher than that in the pretest (36.9%) ( $p = .008$ ). However, the mean score for the delayed posttest (45.2%) is not significantly higher than that in the pretest (36.9%) ( $p = .90$ ). These results seem to indicate that although EC with EEC may be effective for low proficiency JLEs for a short period of time, it does not continue long term.

**Table 1. Results of Experiment 1**

	Pretest	Immediate posttest	Delayed Posttest
Group A (Intermediate)	48.7% (74/152)	70.4% (107/152)	72.4% (110/152)
Group B (Low)	36.9% (31/84)	50.0% (42/84)	45.2% (38/84)
Control Group	47.3% (70/148)	48.6% (72/148)	48.0% (71/148)



**Figure 1. Results of Experiment 1**

## 3.5 Conclusion of Experiment 1

Group A and Group B performed differently on the immediate post- and delayed posttests although they received the same instruction with the same materials from the teacher. Improvement was realized with Group A (intermediate-level JLEs), whereas little change was observed with Group B (low-level JLEs).

This suggests that JLEs with the low proficiency of English may not have fully understood the grammar explanation given from the teacher. Moreover, it could be considered that the lower-level JLEs did not integrate what they learned about sentential subjects with other linguistic items such as sentence structures, functional and lexical words necessary for producing grammatical sentences even if their teacher taught the grammar rules to them explicitly.

The results obtained from Experiment 1 have supported our hypothesis: EI with EEC work well with JLEs whose English proficiency is high. In other words, an intermediate-level proficiency is required to comprehend instructions and integrate the rule with others on the sentence-initial subject of English. EI with EEC should be a suitable method for JLEs to learn the grammatical features of English sentential subjects. However, it turned out not to be effective for all JLEs to learn the grammatical features of English sentential subjects. However, it turned out not to be effective for all JLEs.

## 4. EXPERIMENT 2A AND 2B

### 4.1 Purpose of Experiment 2 and research hypothesis

The purpose of Experiment 2 is to claim that external stimuli (EI with EEC) do not change the difficulty order and the accuracy rate of grammatical morphemes. More precisely, EI with EEC have little effects on raising the accuracy of four verb-related bound morphemes by JLEs. This is because grammatical items which convey pure linguistic functions, such as grammatical morphemes, are systematically acquired and thus external stimuli has little or no influence on altering their accuracy order.



Thus, the hypothesis in Experiment 2 is that EI with EEC on verb-related bound morphemes might be effective in the short-term, that is, just immediately after the treatment, but not effective in the long-term. In order to support this hypothesis, two related but different experiments were conducted with different participants (Experiment 2A and 2B). In Experiment 2A, the researchers gave EI with EEC only to JLEs' who produced errors of 3PS and observed whether their accuracy rate of 3PS exceeded those of the other three morphemes. In Experiment 2B, the researchers gave EI with EEC to all the errors of the four grammatical morphemes JLEs made.

## 4.2 Participants of Experiment 2

Participants in Experiment 2A were all Japanese-speaking university freshmen majoring in economics at the same university in Japan. They were divided into an Experimental Group ( $n=25$ ) and a Control Group ( $n=24$ ). Both groups had the same TOEIC average score:  $380 (\pm 5)$ , which can generally be regarded as a low-intermediate level of English.

Additionally, in Experiment 2B, there was an Experimental Group ( $n=23$ ) and a Control Group ( $n=24$ ) of non-English major JLEs. They were also university freshmen. The mean TOEIC scores were around  $400 (\pm 10)$  for both groups.

## 4.3 Procedure

The whole experiment was conducted for 15 weeks in 2010. Both Experiment 2A and 2B had four steps. In Step 1 (the first two weeks), the examiners gave the participants a pretest. The participants were asked to write in English about what they had done on the previous weekends, about their family members, etc. They also wrote an English composition in class and had a 150-word English composition assignment to be completed as homework.

In Step 2, the treatment was conducted for four consecutive weeks. In the case of Experiment 2A, for 15 minutes in each lesson, the instructor gave the participants EI with EEC on 3PS only, and then had them complete grammar drill exercises emphasizing the use of 3PS. In the case of Experiment 2B, for 30 minutes in each lesson, the instructors gave the participants EI with EEC on the four grammatical morphemes (ING, IRP, RP and 3PS), and then had them complete grammar drill exercises emphasizing the use of these four morphemes.

After every lesson, the participants were asked to write 150-word English compositions in-class and for homework. During the following week, the instructors collected the participants' compositions and provided EEC by underlining their morpheme errors and wrote the correct forms beside them with a red ballpoint pen. Afterwards, the compositions were returned to the participants. The instructor applied the same treatment four times over the four-week treatment period. The four grammatical morphemes, ING, IRP, RP and 3PS were not new grammatical items for the participants since they had already learned them and encountered them many times in English lessons they took since they were in junior high school. Thus, what the instructors did was to have the participants reconfirm the usages of these morphemes.

In Step 3, the immediate posttest (or posttest 1) was conducted. It was done both one and two weeks after the last treatment session. In Step 4, the delayed posttest (or posttest 2) was conducted both seven and eight weeks after the immediate posttest. The four morphemes that appeared in the two in-class compositions, two writing homework assignments, the immediate posttest, and the delayed posttest were analyzed for their changes in accuracy.

## 4.4 Results of Experiment 2A

The results of the Experiment Group are shown in Table 2. The results of the immediate posttest show that the accuracy rate of 3PS improved, and was ranked higher than IRP and RP: its accuracy rate changed from 62.4% up to 81.5%. However, it dropped to 62.8% at the time of the delayed posttest, and became the lowest among the four morphemes. A significant difference was found only with 3PS between the pre- and immediate posttests ( $p < .05$ ) and between the immediate and delayed posttests ( $p < .05$ ); medium effect sizes were found for 3PS in both cases ( $r = -.47$  for the pre- and immediate posttests, and  $r = -.46$  for the immediate and delayed posttests). On the other hand for the Control Group, there were no significant differences and either no or only a small effect size was found between the pretest and the delayed posttests (See Table 3).

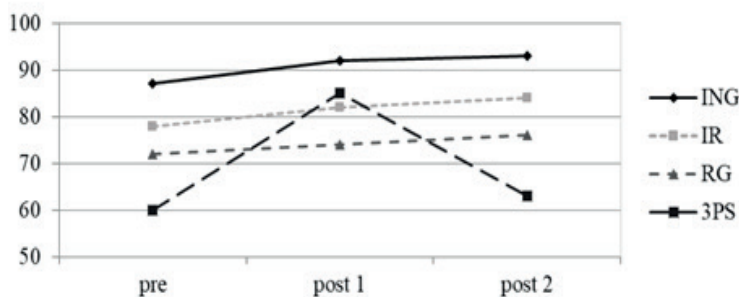
**Table 2. Results of the Experimental Group in Experiment 2A ( $n=25$ )**

	Pretest (%)	Posttest 1 (%)	Posttest 2 (%)
ING	90.0	88.0	90.0
IRP	72.7	78.2	77.3
RP	71.6	73.9	71.8
3PS	62.4	81.5	62.8

**Table 3. Results of the Control Group in Experiment 2A ( $n=24$ )**

	Pretest (%)	Posttest 1 (%)	Posttest 2 (%)
ING	89.9	91.1	89.8
IRP	72.1	75.9	73.3
RP	67.3	70.9	69.4
3PS	62.2	64.3	60.6

The accuracy rate of 3PS increased to second place just after the treatment, but decreased to fourth place in the delayed posttest. This could suggest that EI with EEC did not enhance the accuracy rate of 3PS in the long run. The instructional effect might be sustainable only for a short period of time, as it did not last beyond the period of this study.



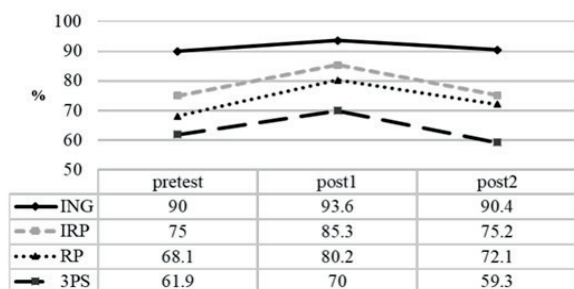
**Figure 2. Results of the Experimental Group in Experiment 2A**

## 4.5 Results of Experiment 2B

Tables 4 to 6 show overall results and descriptive statistics of Experiment 2B. Also the Experimental Group performance across the three tests is visualized in Figure 3.

**Table 4. Results of Experimental Group in Experiment 2B**

	Pretest (%)	Posttest 1 (%)	Posttest 2 (%)
ING	90.0% (63/70)	93.6% (73/78)	90.4% (66/73)
IRP	75.0% (87/116)	85.3% (104/122)	75.2% (79/105)
RP	68.1% (62/91)	80.2% (77/96)	72.1% (62/86)
3PS	61.9% (60/97)	70.0% (70/100)	59.3% (48/81)



**Figure 3. Results of the Experimental Group in Experiment 2B**

A Mann-Whitney Test found no significant difference between the two groups in terms of scores between pretest and posttest 1, and between posttest 1 and posttest 2. Then, Wilcoxon Signed Ranks Test was conducted. The results appear in Tables 5 and 6. Table 5 shows that the Experimental Group improved in the accuracy of IRP and RP although it did not improve in the accuracy of 3PS significantly. The medium effect size suggests some instructional effect. Table 8 shows that the accuracy of 3PS significantly dropped with the Experimental Group.

**Table 5. Test statistics of posttest 1 –pretest for the Experimental Group (n=23) in Experiment 2B**

Post 1 - pretest				
	ING	IRP	RP	3PS
Z	-0.259	-2.137	-2.225	-1.852
Asymp. Sig. (2-tailed)	0.796	0.033	0.026	0.064
Effect size	-0.06	-0.45	-0.46	-0.39

**Table 6. Test statistics of posttest 2 –posttest 1 for the Experimental Group (n=23) in Experiment 2B**

Post 2 – post 1				
	ING	IRP	RP	3PS
Z	-0.269	-1.757	-1.531	-1.963
Asymp. Sig. (2-tailed)	0.788	0.079	0.126	0.050
Effect size	-0.06	-0.33	-0.32	-0.41

## 4.6 Conclusion of Experiment 2

The results indicate little instructional effect on the verbal morphemes: EI with EEC did not change the difficulty order of the four verb-related bound morphemes. We claim that the fixed linear order of L2 morpheme accuracy for JLEs is not influenced by external stimuli (i.e., EI with EEC in the present study). This indicates that acquisition of grammatical morphemes in the L2 will advance according to a fixed path where no external factor will change it. A plenty of linguistic input will promote L2 learners' correct use of grammatical morphemes, but it does not change the difficulty order of grammatical morphemes.

## 5. CONCLUSIONS

Based on the results of the experiments, we could summarize the findings as follows:

- (10) a. EI with EEC could be effective for the current grammatical items at the immediate posttest.
- b. However, for a short period of time, these effects still stay effective for some items, but no effect is found in the other items.
- c. When we examined the differences between these two items, we found evidence that grammatical items belonging to functional categories and/or grammatical morphemes are the ones which effects of EI with EEC, from teachers, do not last long for L2 learners to improve their accuracies.
- d. On the other hand, EI with EEC can be useful for items conveying lexical meanings such as distinctions of sentential subjects and topic phrases.
- e. This asymmetry may be due to the fact that there is a fixed acquisition order for grammatical morphemes. EI with EEC are not able to change the difficulty order of the bound morphemes attached to verbs.
- f. Learners' L2 proficiency levels can influence the degree of effectiveness of EI with EEC: The higher L2 learners' proficiency levels are, the more effective EI with EEC become.

We conclude that the fixed linear order of L2 morpheme accuracy for JLEs is not influenced by external stimuli (i.e., EI with EEC). This indicates that L2 acquisition will advance according to a fixed path where nothing will change it. The present study has provided yet another piece of evidence in support of the systematicity of the L2 acquisition process, claiming that like L1, the L2 acquisition process is not random, but orderly. However, this study does not necessarily deny the role of teacher's instructions and explicit corrective feedback for every aspect of L2 acquisition as they were useful to improve grammatical items which include less formal properties of linguistic functions than grammatical morphemes<sup>1</sup>.

## 6. BIBLIOGRAPHY

- BAILEY, N., MADDEN, C. and KRASHEN, S. D. (1974): "Is there a 'natural sequence' in adult second language learning?", *Language learning*, 24, 235-243.
- BITCHENER, J. (2012): "A reflection on 'the language learning potential' of written CF", *Journal of second language writing*, 21, 348-363.
- DULAY, H. C. and BURT, M. K. (1973): "Should we teach children syntax?", *Language learning*, 23, 245-258.
- DULAY H. C., BURT, M. K. and KRASHEN S. D. (1982): *Language two*, New York, Oxford University Press.

- ELLIS, R., LOEWEN, S. and ERLAM, R. (2006): "Implicit and explicit corrective feedback and the acquisition of L2 grammar", *Studies in second language acquisition*, 28, 339-368.
- FERRIS, D. R. (1999): "The case of grammar correction in L2 writing classes: a response to Truscott (1996)", *Journal of second language writing*, 8, 1-11.
- KURIBARA, C. (2004): "Misanalysis of subjects in Japanese-English interlanguage", *Second language*, 3, 69-95.
- LI, C. N. and THOMPSON, S. A. (1976): "Subject and topic: a new typology of language", in Li Charles N. (ed.), *Subject and topic*, New York, Academic Press, 457-489.
- NAWATA, H. and TSUBOKURA, K. (2010): "On the resetting of the subject parameter by Japanese learners of English: a survey of junior high school students", *Second language*, 9, 63-82.
- SHIBATA, M. (2006): "Topic marking in English composition by Japanese EFL learners", *Scriptsimus*, 15, 1-26.
- SHIRAHATA, T. (1988): "The learning order of English grammatical morphemes by Japanese high school students", *JACET bulletin*, 19, 83-102.
- TERAUCHI, M. (1994): "The acquisition of grammatical morphemes", in Koike Ikuo (ed.), *New current of English as a foreign language based on second language research*, TokyoTaishukan. 24-48. [written in Japanese].
- TOWELL, R. and HAWKINS, R. (1994): *Approaches to second language acquisition*, Clevedon, Multilingual Matters.
- TRUSOTT, J. (1996): "The case against grammar correction in L2 writing classes", *Language learning*, 46, 327-369.
- TRUSOTT, J. (2001): "Selecting errors for selective error correction", *Concentric: studies in English literature and linguistics*, 27, 93-108.
- TRUSOTT, J. (2007): "The effect of error correction on learners' ability to write accurately", *Journal of second language writing*, 16, 255-272.
- WHITE, L. (2003): *Second language acquisition and universal grammar*, Cambridge, Cambridge University Press.

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