

A Comparison of Integrated FFI and Isolated FFI in the Development of Explicit Knowledge and Implicit Knowledge*

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This study aims to investigate which method of instruction between Integrated Form-Focused Instruction (FFI) and Isolated FFI is more effective in developing explicit and implicit knowledge. In Integrated FFI, grammar instruction, such as brief explanations of language forms and error feedback, is provided while learners are engaged in tasks, whereas in Isolated FFI, grammar instruction is provided initially, before tasks are introduced. For the study, 45 first-grade middle school students were divided into two groups. One group received Integrated FFI while the other received Isolated FFI; both types of explicit form-focused instruction were embedded in communicative lessons. Pre- and post-treatment tests were administered to compare the effects of the different types of grammar instruction. The tests consisted of a written error correction test, an elicited imitation test, and a picture-cued oral test. The target grammatical structure was the passive voice. The results of the study show that there was no significant difference between Integrated FFI and Isolated FFI in students' development of explicit or implicit knowledge, and that both manners of instruction can contribute to improvement on written error correction and elicited imitation tests.

[Integrated FFI/Isolated FFI/explicit knowledge/implicit knowledge/
/ / /]

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I. INTRODUCTION

No other topic in the field of second language acquisition (henceforth SLA) has been more controversial than that of second language grammar instruction. At the same time, no other area has been the subject of less change in real classrooms. Theories have swung, pendulum-like, between extremes over the years, yet we find that “grammar instruction has been relatively unaltered by research findings” (Larsen-Freeman, 2015, p. 263).

Traditional approaches to grammar instruction were fairly well undermined, theoretically, by the communicative approaches of the late 1970s and early 1980s. Then, as a complement to strong communicative approaches that eschewed grammar instruction, form-focused instruction (FFI) came to prominence in the 1990s (Spada, 2014). However, the increase in interest in FFI did not mark a return to traditional, separate grammar instruction, but was rather an attempt to situate language form instruction within a communicative approach (Dörnyei, 2009).

However, Spada (2014) has pointed out that even though many researchers currently contend that providing instruction in forms within a meaning-focused context is the most efficacious approach to grammar teaching, in reality, it is one of two extremes that is most often implemented: “either an exclusive focus on form or on meaning” (p. 51). In Korea, Moodie and H. J. Nam (2016) found a large gap between the national English curriculum, which emphasizes a communicative approach, and actual classroom practice, which focuses primarily on test preparation. In Korea’s exam-focused context, teachers and learners understandably feel pressure to teach and learn second language grammar. Because of the ongoing demand for grammar instruction, particularly in Korea, it is important to investigate the effectiveness of different manners of grammar instruction.

The universal importance of grammar instruction to English education is evident from studies worldwide (Lowen et al, 2009; Schulz, 2001). For example, Schulz (2001) found that English teachers and students in an EFL context in Columbia preferred explicit language instruction in language forms, and Lowen et al.’s (2009) investigation of 754 university ESL learners in the United States showed that grammar instruction was felt to be useful.

As a result, researchers have undertaken a systematic study of form-focused instruction, and over time their concern has shifted from a focus on implicit grammar instruction to explicit instruction, due to the effectiveness of the latter for second language learning (Dörnyei, 2009; Norris & Ortega, 2001; Spada, 2014). Recent research has focused on determining the most effective ways to teach second language grammar in meaningful contexts, which language forms to teach, and when to teach them (Spada & Lightbown, 2008; Valeo & Spada, 2015).

The present study focuses on the issue of the timing of grammar instruction. Timing, in

this study, refers to two manners of FFI: ‘integration of attention to form [with communicative activities]’ (Integrated FFI) and ‘separation [of attention to form] from communicative activities’ (Isolated FFI) (Lightbown, 1998, p.189, p.194). Thus, the present study investigated the effects of Integrated FFI and Isolated FFI on explicit and implicit knowledge by conducting a modified replication study of Spada, Jessop, Tomita, Suzuki, and Valeo’s (2014) work. Both types of form-focused instruction were embedded in communicative lessons; only the timing of the instruction differed. The difference between the study of Spada et al. (2014) and the present study is teaching context and subjects. The former study was conducted with adult subjects in EFL classes, whereas the present study was implemented in Korea EFL middle school classes. Thus, this study can give pedagogic implications for English education in Korea.

II. LITERATURE REVIEW

1. Necessity of Grammar Instruction

1) Theories of Grammar Instruction

In the 1980s, many SLA researchers expressed skepticism about the effectiveness of teaching linguistic features. Krashen (1982) famously claimed in his input hypothesis that comprehensible input is sufficient for second language acquisition, and that explicit knowledge acquired through grammar teaching could not be transformed into implicit knowledge. This position is called the *noninterface position* (Ellis, 1993). It argues that explicit grammar instruction cannot contribute to implicit, procedural knowledge. This position has been the main theoretical underpinning of the strong communicative approach. Less extreme than Krashen, Ellis has argued for a *weak interface position* (Ellis, 1993), which acknowledges the potential effectiveness of explicit grammar teaching, but places greater emphasis on learners’ readiness to learn. This position holds that grammar instruction facilitates the transference of explicit knowledge to implicit knowledge indirectly. A third position is the *strong interface position*, proposed by DeKeyser (1998, 2007a, 2007b), in which he argues that explicit knowledge can be directly transferred to implicit knowledge through practice. This position has come to be known as skill acquisition theory, and it suggests that, like learning to play a sport or a musical instrument, language learning is a process of skill acquisition that proceeds through declarative, procedural, and automatic stages (DeKeyser, 2007a, 2007b; Ur, 2011).

2) Studies on Grammar Instruction

As theories of grammar instruction have waxed and waned, empirical studies have kept pace, and several studies have illustrated the limitations of entirely meaning focused communicative language teaching. According to White (as cited in Ellis, 2008), “problematic overgeneralization” cannot be corrected with only communicative input; corrective feedback is also necessary (p. 847). Studies conducted by Harley and Swain, and Vignola and Wesche, (as cited in Doughty & Williams, 1998) show that certain target language forms may not manifest themselves within exclusively meaning-focused language teaching contexts. Lightbown (1998) pointed out that students in French immersion programs did not seem to learn grammar, citing studies by Swain and Carrol (1987). Hinkel and Fotos (2002) have further argued that in communicative language teaching, students have a tendency to develop fossilization and classroom pidgins.

Aligning with this trend in research have come a number of studies of grammar teaching in affirmative positions. Long (1988), for instance, argues for the benefits of direct instruction of linguistic features in his study comparing the effects of grammar teaching and non-grammar teaching. Lightbown and Spada found that lessons in which form and meaning were connected and taught together were more effective than both lessons without form instruction and lessons with a strict form focus (as cited in Lightbown, 1998).

Furthermore, Ellis (2008) contends that the development of high level language competence, such as is needed for academic writing and speaking, requires grammar instruction.

2. Terms and Definitions Related to Grammar Instruction

With the growth in acceptance of the effectiveness and necessity of grammar instruction has come the development of associated terminology. Long (1991) initially drew distinctions between three concepts: focus on meaning, focus on form, and focus on forms. Focus on meaning refers to instruction in which the communication of meaning is the sole focus of attention, while focus on form is instruction in which attention is given to grammatical elements incidentally within meaning-centered contexts. Focus on forms denotes instruction in which linguistic elements are taught in isolation. Based on these concepts, traditional grammar instruction may be classed as a focus on forms. Even though Long acknowledged the necessity of grammar teaching, he supported only moderate incidental grammar instruction, such as recasts.

In addition to the terms coined by Long, another common term is FFI. Although Doughty and Williams suggested it be avoided, as it could refer to either focus on form or focus on forms, FFI has gained a foothold among researchers (as cited in Lowen, 2011).

Spada (1997) defined form-focused instruction as “any pedagogical effort which is used to draw the learner’s attention to language form either implicitly or explicitly” (p.73). Unlike Long’s focus on form, Spada includes proactive and explicit grammar teaching in her definition. However, Spada distinguishes FFI from focus on forms by insisting it occur within meaning-focused lessons. Ellis sought to clarify FFI, describing it as “any planned or incidental instructional activity that is intended to induce language learners to pay attention to linguistic form” (as cited in Lowen, 2011, p. 577). In the present research, Spada’s definition of FFI was used.

3. Timing in Grammar Instruction

As agreement on the necessity of grammar teaching has increased, researchers have turned to more specific issues involved in grammar instruction, such as implicit vs. explicit instruction, what to teach, and the concern of this study, when to provide instruction.

When considering the timing of grammar instruction, there are two primary concerns, according to Lightbown (1998). The first is at what stage of a learner’s development grammar should be taught; the second is at what stage of a lesson it should be taught. The second of these is discussed in this section.

For the purpose of this study, the issue of timing in grammar instruction is limited to the question of when linguistic features should be focused on within a lesson. Lightbown (1998) divided the issue into two positions: integration and separation. Spada and Lightbown (2008) later coined the terms Integrated FFI and Isolated FFI to refer to the positions. Integrated FFI is instruction in which a “learner’s attention is drawn to language form during communicative or content-based instruction” and encompasses both Ellis’s planned and incidental focus on form (Spada & Lightbown, 2008, p. 186). Isolated FFI, on the other hand, is used to describe grammar instruction that occurs separately from communicative activities, but still within an otherwise meaning-focused context, distinguishing it from Long’s focus on forms (Spada & Lightbown, 2008).

Both instructional timings have received empirical and theoretical support from different researchers. Long contends that the teaching of linguistic features should be integrated with communicative activities (as cited in Spada & Lightbown, 2008). The theoretical basis for Integrated FFI lies in the theory of transfer appropriate processing (TAP) (Segalowitz & Lightbown, 1999; Spada & Lightbown, 2008). This theory argues that “learners retrieve knowledge best if the processes for retrieval are similar to those that were used in the learning condition” (Spada & Lightbown, 2008, p. 190). Applied to SLA, this means that if language forms and meanings are taught together in communicative contexts, learners will be better able to retrieve knowledge of the forms in similar contexts in real settings outside the classroom. In addition, according to Valeo and Spada’s interview research (2015), most

learners and teachers in both ESL and EFL contexts in Canada preferred integrated grammar teaching. Spada and Lightbown (2008) observed that Integrated FFI tends to be favored by more fluent learners and young learners as well.

On the other hand, in defense of Isolated FFI, some scholars have argued for the effectiveness of separate grammar instruction. Lightbown (1998) argued that “there is a role for grammar instruction that is separate from communicative activities and yet is integral to the lesson as a whole” (p.194). Ellis also pointed out the necessity of separate grammar teaching due to the limited processing capacity of the human mind (as cited in Spada & Lightbown, 2008). According to Cowan (2010), working memory capacity is limited, thus cognitive task’s completion is affected by this limited capacity. In addition, Spada et al.’s (2014) research indicated that separated teaching of grammar was significantly effective. File and Adams’s research (2010) also supported this position, even though their study compared Integrated FFI and Isolated FFI for vocabulary.

Bringing some of these perspectives together, Spada and Lightbown (2008) suggested that linguistic features which are affected by L1, or not noticeable, or rare, are more suitable for Isolated FFI, whereas forms which are difficult to explain are more suited for Integrated FFI.

4. Previous Studies Related to the Timing of Grammar Instruction

Elgün-Gündüz, Akcan, and Bayyurt (2012) conducted research comparing Isolated FFI and Integrated FFI in a Turkish primary school. The researchers utilized the terms from Spada and Lightbown’s study (2008). The participants were 120 sixth-grade students in two private primary schools. In each school a different type of FFI was implemented. All students received ten hours of theme-based CBI English lessons over an eight-month period. A pre-test and post-test were administered before and after the program to measure vocabulary, grammar, and writing development. The testing instruments used were the Key English Test (KET, a first-level Cambridge ESOL test) and written essays. Student attitudes toward different types of FFI were also investigated. The results showed that students who received Integrated FFI improved more in vocabulary, grammar, and writing. Those students also expressed a preference for Integrated FFI on a survey and in interviews. The results support the contention that Integrated FFI is suitable for young learners (Spada & Lightbown, 2008).

Spada et al. (2014) also conducted a study comparing the effects of Integrated FFI and Isolated FFI. The terms used, Integrated FFI and Isolated FFI, again corresponded with those used by Spada and Lightbown (2008). Both manners of instruction were explicit, planned, and occurred within meaning-focused lessons. The only difference being whether the timing of instruction was concurrent with communicative activities or separate from

them. The participants were 109 adult learners in a non-credit ESL program in Canada. The passive voice was chosen as the target linguistic form because it often proves a difficult form for learners, it is suitable for interlanguage analysis, and subjects in the study had not yet learned it. Instruction was provided for four hours each day over a three day period. The topics used for the program were medical practices and famous places. Before and after the experiment, a written error correction task (ECT) and a picture-cued oral production task (OPT) were administered. Then, paired samples t-tests were used to determine whether significant differences existed between the Integrated FFI and Isolated FFI groups. The study found no significant differences in test performance between the groups that might be attributed to the different timings of grammar instruction, in contrast to the findings of Elgün-Gündüz et al. (2012).

These studies are valuable in comparing separate teaching of grammar and concurrent teaching of grammar with communicative activities, focusing timing issue of grammar instruction. In addition, these studies are noteworthy since they discussed the development of both explicit and implicit knowledge of learners. The study of Elgün-Gündüz et al. (2012) reached the conclusion that Integrated FFI is more effective in improvement of both types of knowledge. The important feature of this study is that the subjects of this study were primary school students and the experiment was practiced in extended period through CBI class. However, one of the reasons why Integrated FFI was more effective in Elgün-Gündüz et al.'s study could be that the experiment was carried out in CBI class. It is probable that young learners may have had difficulties in understanding teacher's explanation in CBI class. On the other hand, the study of Spada et al. (2014) had a result that both instructions are effective. This study was conducted in ESL adult class. Thus, there is a need for research in EFL class in Korean secondary schools.

Therefore, to further investigate the effects of Integrated FFI and Isolated FFI on explicit and implicit knowledge in EFL class, we conducted a modified replication study of Spada et al.'s (2014) work comparing the two timings of FFI. Both timings of FFI were embedded in communicative lessons. Grammar was taught with Integrated FFI through means such as brief grammatical explanations and corrective feedback, and was implemented while learners were engaged in tasks. Whereas, for Isolated FFI, form instruction was given separately from tasks, in this case during the first part of the lesson before tasks were introduced (Spada et al., 2014). The study seeks to answer the following questions:

- 1) Which method of instruction between Integrated FFI and Isolated FFI is more effective in the development of explicit knowledge?
- 2) Which method of instruction between Integrated FFI and Isolated FFI is more effective in the development of implicit knowledge?

III. METHOD

1. Participants

The participants of this study were forty-five first-year students at a public middle school in Gyeonggido, Korea. Twenty-four students were allotted to the Integrated FFI group, and twenty-one students were assigned to the Isolated FFI group. The study was conducted within the new free semester curriculum of the school. During the free semester curriculum, students are allowed to select several elective courses from a variety of options.

All of the subjects were non-native speakers of English, and only two had experience studying abroad, according to the survey.

2. Materials

1) Survey

The survey questionnaire was adapted from S. Kang's (2009) dissertation. The questionnaire aimed to investigate the subjects' background and experience in English learning. The questionnaire employed a five-point Likert scale (1: strongly disagree; 5: strongly agree). The survey questionnaire was piloted with a class of students from another middle school in Kyoungki, Korea and problematic items were modified.

2) The Pre-test and the Post-test

The pre-test and post-test were constructed by adapting the materials in Spada et al. (2014). Both tests comprised a written error correction test (ECT) and a speaking test.

The ECT was used to measure students' explicit (declarative) knowledge of grammar, and the speaking test was used to measure implicit (procedural) knowledge of grammar. The ECT consisted of 20 items: fifteen passive items and five items of tense or agreement. In preparing the errors in the items, S. Lee (2007) was followed. According to Lee, Korean EFL students find it especially difficult to differentiate between the various usages of past participles and present participles. Also, students have a tendency to omit the auxiliary verb *be* and the *-ed* morpheme in the past participle. The ECT of Spada et al. (2014) was developed based on these findings, and the present study also referred to it. Regular and irregular verbs were distributed between items in similar proportion on the test. Some sentences were adapted from the ECT of Spada et al., some were excerpted from the textbook used by the participants, and some were taken from materials used in the treatment of the present study.

The speaking test consisted of an elicited imitation test and a picture-cued oral test. Elicited imitation (EI) is a technique in which participants listen to and repeat a sentence, usually including a target linguistic structure (Jessop, Suzuki, & Tomita, 2007). This technique has been used since the 1960s in language acquisition research. The purpose of EI is to assess the speaking competence of learners. According to Ellis (2005) and Erlam (2006), an EI test provides measurement of learner speaking performance. The EI test developed for the present study comprised five sentences, excerpted from a middle school English textbook and from the materials used in the treatment. During the test, individual students repeated sentences one-by-one after hearing each sentence read by the researcher. The test for each student lasted approximately 2-3 minutes. The purpose of the test was to assess whether participants could comprehend the sentences and reproduce the right target grammar structure (passive voice). The picture-cued oral test was developed by adapting the picture-cued oral task of Spada et al. (2014). In this test, students were expected to orally produce correct active and passive voice sentences, based on word and picture clues. This test also had five items and was considered more difficult than the elicited imitation test.

3) The Materials for the Main Treatment

The passive voice was selected as the target language form for this study because the passive structure is usually considered difficult for second language learners (Hinkel, 2008; Spada et al., 2014), and it had not yet been taught to the participants of this study.

In Spada et al. (2014), adult participants were given communicative/content-based activities combined with explicit grammar practice during treatment. Elgün-Gündüz et al. (2012) also employed content-based language instruction (CBI) when investigating the effects of Isolated FFI and Integrated FFI in a Turkish primary school. The present study used task-based activities with Isolated FFI and Integrated FFI. Task-based activities were employed because they better suited the participants, who were of various proficiency levels but learning together in the same class. The Isolated FFI lessons consisted of Isolated FFI followed by simple tasks, and the Integrated FFI lessons consisted of the same simple tasks but with instruction in linguistic forms incorporated within them.

Before the passive structure lessons, participants were given lessons on the present tense and past tense as part of the scaffolding process.

Topics chosen for passive structure instruction included inventions, endangered animals, and the animated program *Paddington Bear*. The focus of inventions, a popular topic for teaching the passive structure, was on *appropriate technology*. *Appropriate technology* refers to tailored technology which is energy efficient, low-tech, and DIY-based for specific underdeveloped areas. The topic was introduced through video clips, as visual

materials are considered useful means to help students pay attention to content, and Korean students have been found to have a visual preference (Reid, 1987). For the topic of inventions, the YouTube video clips, 'A liter of light' and 'A lucky iron fish', were used in the class. 'A liter of light' introduces a novel method of lighting homes in the third world using solar energy and plastic bottles. 'A lucky iron fish' explains how a small fish-shaped iron product is helping to solve Cambodia's anemia problem. After watching these video clips, students matched and ordered picture cards and sentence cards to complete the process of making a liter of light and using an iron fish. For the next topic, endangered animals, video clips from YouTube of an injured turtle were utilized for schema-building. Then, students were asked to match sentence cards with pictures of endangered animals. For the final topic, students watched several video clips excerpted from the animated program *Paddington Bear* and wrote sentences about the story. Sentence cards, picture cards, and worksheets for all topics were developed by the researcher.

3. Procedure

First, the pre-test and a lesson were piloted with one class of first-year students at a middle school in Ilsan in Gyeonggi-do, Korea on July 14th, 2015. After the piloting, the degree of difficulty of the pre-test were adjusted higher and a lesson plan was modified based on feedback.

The main experiment was conducted as part of the free semester program at a middle school in Uijeongbu in Gyeonggi-do, Korea. Treatment ran every Tuesday from August 18th to October 20th (eight weeks), 2015. Forty-five students enrolled in the program and were divided into two classes of twenty-four and twenty-one students. One class was designated the Integrated FFI group and the other the Isolated FFI group. Students had one class (45 minutes) taught by the first author every Tuesday for eight weeks. In addition to this class, they had three other regular English classes every week with their own middle school English teachers.

In the first class, the written error correction portion of the pre-test was administered, which lasted approximately 20 minutes. In the second class, students took the speaking portion of the pre-test, which consisted of an elicited imitation test and a picture-cued oral test.

From the third week, participants attended treatment classes. The Integrated FFI group received brief explicit grammar explanations or error correction while performing tasks, whereas the Isolated FFI group received explicit grammar instruction before performing the same tasks. In the first treatment lesson, students practiced the present tense by engaging in various simple activities. Being the first teaching lesson, it included warm-up activities designed to attract the attention of middle school first graders. The next week,

participants were given a lesson on the past tense. After watching short commercial video clips, students wrote stories about them. These two initial lessons were intended to provide scaffolding for the main passive structure lessons to follow. Beginning in week five, students were taught the passive structure with accompanying tasks. The first topic was “inventions” and focused on *appropriate technology* for underdeveloped nations. After watching short video clips for schema building, students in the Isolated FFI group were given a direct explanation of the passive structure, delivered through a PowerPoint presentation. They were then asked to order the *appropriate technology* process they had viewed and match sentence cards with picture cards. Students in the Integrated FFI group, however, were given a brief explanation of the passive structure while they were performing the same tasks. The instructor provided a grammar explanation and answered student questions group by group while cycling through the classroom. Students in both classes worked in groups of four. In the sixth week, the topic for the lesson was endangered animals. Students again watched a short video clip for schema building. A grammar explanation was given to the Isolated FFI group in the former part of the lesson. Then, the context for the task was given: students were to play the roles of representatives of several countries and NGOs at an international conference to discuss the protection of endangered animals. Students were divided into two groups in this lesson. One group of students (group A) was given endangered animal picture cards and sentence cards containing problems faced by endangered animals, which they were supposed to match in pairs. The other group (group B) was given endangered animal picture cards and sentence cards containing solutions to problems faced by endangered animals, which they were to match. Two students from each group then joined together to create groups of four and held conferences. Finally, students wrote down their conference results. In the seventh week, the topic was the animated program *Paddington Bear*. Again, language form instruction was provided to the Isolated FFI group at the beginning of the lesson, whereas the Integrated FFI group received instruction while engaged in tasks. After watching several video clips from the program, students were given the role of news reporter and asked to write a news story about Paddington using supplied words and phrases. About 30 percent of the teacher’s classroom speech was carried out in English during the lessons, as students of various levels were mixed in the class.

In week eight a post-test (ECT and speaking test) was administered.

4. Measurement

In scoring the pre-test and post-test, Spada et al.'s (2014) method was followed. Their scoring method was based on three categories: target-like performance, non-target like performance, and interlanguage development. Only the predicate portions of student responses were scored. In scoring the ECT, if a student recognized a correct sentence as right, or modified an incorrect sentence to form a correct sentence, three points were awarded (e.g., The telephone was invented by Bell in 1876). In correcting an incorrect sentence, if errors in tense or agreement or incorrect modifications of the past tense or past participle were made, two points were given (e.g., The telephone was invented; Three trees was planted). If the wrong tense of the auxiliary verb or the wrong form of the past participle were used, only one point was given. If there was no effort to correct an inaccuracy, no auxiliary verb was used (e.g., Three trees planted last year), or an infinitive verb form was used with the auxiliary 'be' verb, no points were awarded. The maximum total score on the ECT was 60.

A similar point system was used for the speaking test. Spada et al.'s (2014) method was again followed. Three points were awarded for each correct passive sentence. In cases of errors of agreement, tense, or past participle formation, two points were given. Unlike the case of the ECT, one point was given for use of active voice sentences in the speaking test, as some native speakers have been reported to use the active voice under the same circumstances (Spada et al., 2014). However, no points were given for incorrect active voice sentences, use of the present participle instead of the past participle, use of 'have' instead of the auxiliary verb 'be,' or illogical sentences (e.g., The bottle is install in the roof). The maximum score for the speaking test was 30.

5. Data Analysis

The results from the pre-tests and post-tests were analyzed using a repeated measures ANOVA. The analysis was conducted to determine if significant difference existed between the Integrated FFI group and the Isolated FFI group on the ECT and speaking test after eight weeks of treatment. In this analysis, the within-subjects variable was Time (pre-test ECT vs. post-test ECT; pre-test elicited imitation vs. post-test elicited imitation; pre-test picture-cued oral test vs. post-test picture-cued oral test), and the between subjects variable was Group (Integrated FFI vs. Isolated FFI). The significance level was set at 0.05.

IV. RESULTS

1. Results From the Written Error Correction Test (ECT)

An analysis of variance (ANOVA) with repeated measures was used to compare the difference between the pre-tests and the post-tests of the Isolated FFI group and the Integrated FFI group. Table 1 presents the mean scores of both groups for the pre-test and the post-test administered following treatment. As can be seen, the test scores for both groups improved (from 22.46 to 26.96 for the Integrated FFI group, from 22.81 to 25.71 for the Isolated FFI group). Table 2 shows the effects by Time and Group. It is worth noting that statistical significance was reached for Time; however, there was no main effect for Group, and there was no significant interaction between Time and Group. It means that scores improved in a similar manner, regardless of group.

TABLE 1
Descriptive Statistics for Written Error Correction Test

Time	Group	<i>M</i>	<i>SD</i>	<i>n</i>
Pre-test	Integrated FFI group	22.46	13.74	24
	Isolated FFI group	22.81	17.10	21
	Total	22.62	15.22	45
Post-test	Integrated FFI group	26.96	13.78	24
	Isolated FFI group	25.71	17.68	21
	Total	26.38	15.55	45

TABLE 2
Source Table for ANOVA With Repeated Measures for Written Error Correction Test

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Within-Subjects					
Time	307.05	1	307.05	9.97	.003*
Time x Group	14.25	1	14.25	.46	.500
Error (time)	1323.90	43	30.788		
Between-Subjects					
Intercept	53717.08	1	53717.08	118.46	.000*
Group	4.46	1	4.46	.01	.921
Error	19498.53	43	453.45		

* $p < 0.05$

2. Results From the Speaking Test

1) Results From the Total Speaking Test

A repeated measures ANOVA was also used to analyze the results of the speaking test.

As can be seen in Table 3, the mean score of group 1 (Integrated FFI) was 15.71 for both the pre-test and post-test. The mean scores of group 2 (Isolated FFI) for the pre-test and post-test were 14.29 and 16.19, respectively. However, Table 4 reveals that there was no main effect for Time or Group, and there was no significant interaction between Time and Group.

TABLE 3
Descriptive Statistics for Total Speaking Test

Time	Group	<i>M</i>	<i>SD</i>	<i>n</i>
Pre-test	Integrated FFI group	15.71	6.25	24
	Isolated FFI group	14.29	8.29	21
	Total	15.04	7.23	45
Post-test	Integrated FFI group	15.71	6.16	24
	Isolated FFI group	16.19	8.37	21
	Total	15.93	7.19	45

TABLE 4
Source Table for ANOVA With Repeated Measures for Total Speaking Test

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Within-Subjects					
Time	20.31	1	20.31	1.84	.18
Time x Group	20.31	1	20.31	1.84	.18
Error (time)	474.90	43	11.04		
Between-Subjects					
Intercept	21452.06	1	21452.06	226.16	.00*
Group	4.95	1	4.95	.05	.82
Error	4078.53	43	94.85		

* $p < 0.05$

2) Results From the Elicited Imitation Test

As the speaking test consisted of an elicited imitation test and a picture-cued oral test, repeated measures ANOVAs were carried out to analyze each sub-test, following the analysis of the speaking test as a whole. As Table 5 illustrates, for the elicited imitation test the mean scores of the Integrated FFI group were 11.33 on the pre-test and 11.79 on the post-test, and the mean scores of the Isolated FFI group were 9.95 on the pre-test and 11.67 on the post-test. Table 6 shows there was a main effect for Time. However, there was no main effect for Group, and there was no significant interaction between Time and Group, indicating that scores improved regardless of group.

TABLE 5
Descriptive Statistics for Elicited Imitation Test

Time	Class	<i>M</i>	<i>SD</i>	<i>n</i>
Pre-test	Integrated FFI group	11.33	3.58	24
	Isolated FFI group	9.95	4.53	21
	Total	10.69	4.06	45
Post-test	Integrated FFI group	11.79	3.36	24
	Isolated FFI group	11.67	3.85	21
	Total	11.73	3.55	45

TABLE 6
Source Table for ANOVA with Repeated Measures for Elicited Imitation Test

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Within-Subjects					
Time	26.43	1	26.43	6.72	.013*
Time x Group	8.83	1	8.83	2.24	.141
Error (time)	169.12	43	3.93		
Between-Subjects					
Intercept	11211.36	1	11211.36	440.75	.000*
Group	12.70	1	12.70	.49	.484
Error	1093.78	43	25.43		

* $p < 0.05$

3) Results From the Picture-cued Oral Test

Table 7 provides descriptive statistics for the two groups for the picture-cued oral test. As can be seen in Table 8, there was no main effect for Time or Group, and no interaction between Time and Group, indicating that there was no significant change in scores in either group.

TABLE 7
Descriptive Statistics for Picture-cued Oral Test

Time	Group	<i>M</i>	<i>SD</i>	<i>n</i>
Pre-test	Integrated FFI group	4.38	3.96	24
	Isolated FFI group	4.33	4.74	21
	Total	4.36	4.29	45
Post-test	Integrated FFI group	3.92	3.94	24
	Isolated FFI group	4.10	5.87	21
	Total	4.00	4.88	45

TABLE 8

Source Table for ANOVA With Repeated Measures for Picture-cued Oral Test

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Within-Subjects					
Time	2.71	1	2.71	.32	.571
Time x Group	.27	1	.27	.03	.857
Error (time)	357.88	43	8.32		
Between-Subjects					
Intercept	1565.57	1	1565.57	44.81	.000*
Group	.10	1	.10	.00	.957
Error	1502.05	43	34.93		

* $p < .05$

4) Results From the Survey

When asked about their English self-study habits, almost half of the students (48.9%) answered that they studied English outside of school for five to seven hours per week, and this behavior was similar for both groups. Regarding grammar teaching, 50% of the integrated FFI group (12 students) and 28% of the isolated FFI group (6 students) claimed not to like studying English grammar; however, 45.8% (11 students) of the integrated FFI group and 52% (11 students) of the isolated FFI group acknowledged the necessity of grammar learning. Furthermore, 42.2% of the students (8 integrated FFI students and 11 isolated FFI students) expressed a preference for participating in activities in English class, and 24.5% of the students (7 integrated FFI students and 4 isolated FFI students) answered that activities are effective for grammar. However, some students still thought their teacher's grammar explanations were more beneficial than learning through activities (33.3% integrated and 42.8% isolated).

V. DISCUSSION

The purpose of the present study was to investigate which method is more effective in developing explicit and implicit knowledge: Integrated FFI or Isolated FFI.

Results show that both groups improved on a written error correction test (ECT), but there was no significant difference between the two groups. The written ECT was used to measure learners' explicit knowledge of target grammar. Thus, the different timings of grammar instruction provided to the groups can be regarded as equally effective for helping learners acquire explicit grammar knowledge. This finding corresponds with that of Spada et al. (2014), and this study used a written ECT similar to the one they employed.

The results of the speaking test were more complex. The speaking test for the present study aimed to measure implicit knowledge and consisted of an elicited imitation test and a

picture-cued oral test. In terms of the elicited imitation test, both the Integrated FFI and the Isolated FFI group improved significantly, and hence, both timings of grammar instruction seem to have a positive effect on the development of implicit knowledge. On the other hand, the analysis of the picture-cued oral test results revealed that neither group improved significantly.

In response to the first research question, the results of the written ECT show that both instructional timings were effective in developing declarative knowledge. The difference in the timing of instruction appears to have no meaningful effect on explicit knowledge. This result is in line with that of Spada et al. (2014). This position is also supported by File and Adams's research (2010), even though their study compared Integrated FFI and Isolated FFI for vocabulary.

Since little empirical research has been done comparing Integrated FFI and Isolated FFI, it is worthwhile to consider studies that have treated each separately. As previously discussed, Integrated FFI has received wide support from L2 researchers (Celce-Murcia, 2002; Long, 1991). Fotos and Ellis (1991) demonstrated that communicative grammar tasks were more effective than traditional grammar instruction. Grim's (2008) results also showed that integrated instruction in grammar forms was effective when situated within meaningful content. Research into the effectiveness of Isolated FFI has suggested that separate grammar instruction can also be effectively implemented when necessary (de Oliveira & Schleppegrell, 2015; Ellis, 2002; Lightbown, 2004; VanPatten, 2002). It has been argued, for example, that some linguistic forms of low frequency or low salience in the input require more explicit teaching.

In response to the second research question, results show that both FFI groups improved significantly on the elicited imitation test, but registered no change on the picture-cued oral test. Even though both tests are used to assess implicit knowledge, the elicited imitation test is easier than the picture-cued oral test and requires less practice. Participants in the present study did not have much time to practice with the target grammar form. Thus, it may be that students performed better on the elicited imitation test because it requires less practice than the picture-cued oral test, which demands substantial speaking practice. This discussion is consistent with DeKeyser's (1998) position that practice is required to change explicit (declarative) knowledge into implicit (procedural) knowledge. Elgün-Gündüz et al. (2012) conducted research for eight months and Spada et al. (2014) conducted class four hours per day over three days, and hence the length and intensiveness of treatment, respectively, may have provided their participants with sufficient practice.

Interestingly, Elgün-Gündüz et al. (2012) arrived at different results in their research. They found that Integrated FFI groups learned grammar and vocabulary more successfully than Isolated FFI groups. One possible explanation for the difference in the findings is due to age variance in the participants. The participants in Spada et al.'s study were adults,

whereas those in Elgün-Gündüz et al.'s were primary school students. It is noteworthy that adult learners are generally said to be more receptive to isolated form instruction (Barkuizen, 1998, as cited in Spada & Lightbown, 2008). Older learners are also thought to rely more on analytical ability than younger learners (Dekeyser & Ravid, 2010; Ellis & Shintani, 2014).

VI. CONCLUSION

The purpose of the present study was to determine whether Integrated FFI or Isolated FFI is more effective in the development of explicit and implicit knowledge. In terms of the first research question, regarding explicit knowledge, no significant difference was found between either timing of FFI in terms of their relative effectiveness. Both FFI timings contributed to the development of student language competency to a statistically equivalent extent, as measured on a written error correction test. Findings were similar for the second research question, regarding implicit knowledge. There was no significant difference found between the two timings of FFI, and both had a positive effect in developing implicit knowledge, as measured by an elicited imitation speaking test, though no significant improvement was made on a picture-cued oral test. Again, no significant difference was found in the effectiveness of the two timings of FFI. The lack of improvement shown on the picture-cued oral post-test may be explained by insufficient practice due to the time limitations of the treatment.

1. Implications

The results of the study reveal that a combination of form-focused and meaning-based instruction is valid regardless of the timing of FFI. Both Integrated FFI and Isolated FFI can be implemented successfully within communicative contexts. Based on earlier research stressing the negative aspects of traditional separate grammar instruction, researchers and teachers have expended considerable effort exploring ways to integrate grammar instruction within meaning-focused contexts. However, the results of the present study show that separate grammar instruction is also effective, and the timing of the instruction does not seem to be important as long as it occurs in relation to a communicative context.

When comparing these findings with previous research, the environment and subjects of the study are especially important. Unlike previous work by Spada et al. (2014) and Egün-Gündüz et al. (2012), this study was conducted in EFL classes, and the subjects were middle school students. In EFL classes, grammar explanations delivered in the students' mother tongue can be utilized in a principled way to facilitate student understanding. Egün-

Gündüz et al.'s (2012) different results may be partially explained by the fact that their study, while conducted in an EFL context, investigated classes adopting a CBI approach.

The findings of the present study have a number of pedagogical implications for EFL in Korea. First, Isolated FFI offers a promising alternative method of grammar instruction for grammar dominant English classrooms in Korean high schools. According to Moodie and H. J. Nam (2016), there exists a substantial gap between the national English curriculum in Korea and the pedagogic reality of Korean classrooms. They point out that while the Seventh National Curriculum emphasizes speaking proficiency development, communicative approaches, task-based language teaching, and cooperative learning, classroom reality remains far from these ideals, especially in high schools. Several factors contribute to this ongoing situation, such as excessive focus on receptive skills, learner level gaps, and grammar-centered exams. In particular, the enormous pressure to prepare students for the college scholastic ability test (CSAT) causes teachers to concentrate almost exclusively on teaching grammar and receptive skills like reading (Moodie & H. J. Nam, 2016). The result has tended to be a neglect of communicative approaches to language teaching. With this in mind, Isolated FFI may present a realistic pedagogic means to combine form-focused and meaning-based teaching. The separate timing characteristic of Isolated FFI could enable teachers to more easily apply this method to existing classes. Many teachers already provide grammar instruction separately in high schools in Korea, and hence, they may be more inclined to teach communicatively if they find they can transfer their existing grammar instruction into an Isolated FFI format and combine it with a more communicative approach.

The results of the study have direct implications for middle school classrooms as well. The study shows that separate teaching of grammar within meaningful contexts is beneficial for middle school second language learning. In Korea, middle school English classes tend to fall into one of two camps: activity heavy classes based on a communicative approach or classes dominated by grammar explanations. Teachers who rely heavily on communicative activities can be reluctant to provide grammar explanations, whereas teachers of grammar dominant classes may have difficulty implementing communicative activities due to time pressures and the reality of an extremely exam-oriented school culture. The results of this study suggest that teachers seriously consider the benefits of implementing a productive combination of separate grammar teaching and communicative activities within meaningful contexts. As J. Lee and J. Lee (2012) said, "instruction methods do not need to be all-or-nothing" (p.14). They can take heart in the fact that, rather than struggling to find ways to integrate grammar teaching concurrently with communicative activities, they can practice grammar teaching separately, in good conscience, provided it is done in relation to communicative activities in a meaningful context.

2. Limitations and Suggestions

A more extended treatment period accompanied by additional practice may be needed to attain a more complete picture of the effectiveness of FFI on picture-cued oral tests. As previously discussed, unlike the other tests, there was no effect from either type of FFI on the picture-cued oral test results. In Spada et al. (2014), both types of instruction proved to be effective in improving implicit knowledge as measured on a picture-cued oral test. It may be that an experiment of longer duration that includes more opportunities for practice will result in similar improvements on the picture-cued oral test.

Also, it is worth investigating in more detail the relationship between age and the different types of FFI. It should be noted that Elgün-Gündüz et al. (2012) found Integrated FFI to be more effective than Isolated FFI, in contrast to the present study which found no meaningful difference between the two. The discrepancy in the findings may be attributable to age variance, and more research with different age groups is required to help clarify this issue.

Lastly, further research into which type of FFI may be better suited for teaching different language features is warranted. Some argue that Isolated FFI may be more effective for teaching language forms which are simple but not frequent in oral discourse, whereas Integrated FFI may be better for teaching language forms which are complex and difficult to explain (Spada & Lightbown, 2008). Additional research on the relationship between different types of FFI and various language features could help lead educators to more effective teaching practices.

Little work has been done on different timings of form-focused instruction within meaningful contexts, and research on Isolated FFI has been particularly scant. However, this area holds intriguing potential for grammar instruction in real classrooms.

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Examples in: English

Applicable Languages: English

Applicable Levels: Secondary

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