



Exploring the Sequence Effect of Input and Output on the Learning of English Articles

Eun Young Kang (Kongju University)



This is an open-access article distributed under the terms of the Creative Commons License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Received: Jan. 5, 2022
Revised: Feb 20, 2022
Accepted: Feb. 27, 2022

Eun Young Kang
Professor, Kongju University
E-mail: ekang@kongju.ac.kr

ABSTRACT

Kang, Eun Young. 2022. Exploring the sequence effect of input and output on the learning of English articles. *Korean Journal of English Language and Linguistics* 22, 86-99.

This study examined whether the ordering of input and output could affect the learning of English articles. Sixty-nine Korean high school learners of English were divided into two experimental groups and a comparison group. The experimental groups were provided with (1) an L1-L2 translation output task and (2) a relevant L2 narrative written input, while two groups of students were presented with the tasks in a reverse order. An input-output group read an L2 narrative text first and then engaged in the L1-L2 translation, whereas an output-input group completed the translation followed by an opportunity to read the narrative text. The comparison group read the same L2 text and completed reading comprehension questions. After this cycle of treatment was repeated three times, the learners' use of English articles was assessed using a writing task. Progress was measured with two post-tests based on the TLU (Target-Like Use, Pica 1991) score for their use of articles. A repeated measure ANOVA revealed that the output-input treatment resulted in higher scores throughout the two post-tests than the input-output sequence and the comparison group. The result indicates that the availability of relevant input immediately after learners' output experience could enhance the learning of particular elements of language for which they are acquisition-ready. This result may have implications for language teachers and L2 researchers in helping them to design output tasks.

KEYWORDS

English articles, input, output, noticing function of output

1. Introduction

It is generally acknowledged that noticing plays a key role in acquiring new linguistic systems (Schmidt 2001). Based on this acknowledgement, L2 researchers have investigated ways to draw learners' attention to a particular linguistic target to promote grammar learning. A variety of different ways, including input enhancement (Sharwood Smith 1993) and focus on form (Doughty 2001, Doughty and Williams 1998), have been proposed in the literature, but in recent years, many researchers have been interested in the role that output plays in noticing (e.g., Izumi 2003, Izumi and Izumi 2004, Song and Suh 2008, Uggen 2012). Swain (1985) argues that output, using the target language through speaking or writing, makes learners aware of their lack of L2 knowledge. She further claims that this awareness of linguistic limitations may prompt learners to pay close attention to the use of the target language produced in their surroundings.

Since Swain (1985) first proposed the noticing function of output, numerous reports have empirically proven that producing output could have positive benefits on L2 learning. However, there are still some gaps that need to be addressed in order to further our understanding of the role of output in L2 learning, especially in the written mode. In much of the research, different types of output tasks have been used as tools for eliciting learners' written productions, including a text reconstruction (e.g., Izumi and Bigelow 2000, Izumi et al. 1999, Song and Suh 2007) and a picture description followed by the provision of a relevant text (Hanaoka 2007, Qi and Lapkin 2001). Such tasks are defined as written output tasks and contrived to provide an opportunity to produce L2 in empirical studies, but output conditions created by text reconstruction and picture description tasks could be differentiated in that each task is preceded or followed by relevant input, respectively. Specifically, as for text construction, learners are usually first provided with input in the form of a text including many instances of a target grammatical feature and then asked to produce output by writing what they have read. On the other hand, with regard to picture description tasks, the order of the provision of input and output is reversed. Learners are first asked to produce output by writing in response to a picture prompt requiring the use of a target structure and then to process input which is usually a sample text modeled use of the relevant structure. That is, written output tasks are generally conflated with preceding or following input, but few studies have investigated the sequence effect of input and output. As a result, little is known regarding the ordering effect of output and related input despite considerable attention given to the effectiveness of output as a way to help learners develop their interlanguage. Without a better understanding of the potential contribution to L2 learning created by such output conditions, interpretation of the results in L2 output studies is sharply constrained.

Within this context, this study explored the sequencing effects of input and output on L2 learning. Specifically, this study presented data from an investigation in which groups of Korean EFL learners engaged in two different tasks in terms of the sequence of presentation of output and relevant input in order to examine whether difference in the order of input and output could affect learning of linguistic elements. In this study, the English article systems were selected as a target structure because it was found one of the most frequent sets of errors made by Korean learners of English.

2. Literature Review

2.1 Theoretical Basis: The Output Hypothesis

In Second Language Acquisition (SLA) literature, researchers have established that input plays a crucial role in promoting language acquisition. As aptly pointed out by Schwartz (1993), “[f]or the language system of a particular language to grow, the acquirer must have exposure to instances or exemplars of that particular language” (p. 148). Input serves to exemplify what the target language is like and how it works. It provides L2 learners with the data they need “to formulate, confirm, and revise hypotheses about the target language” (Han and Sun 2014 p. 8). Since input serves as a source of linguistic information to learners, exposure to target language (TL) input is considered pivotal for SLA to take place (Gass 1997, Krashen 1985, Long 1996).

Krashen (1985), in particular, argues that L2 acquisition occurs mainly through exposure to comprehensible input. He claims that learners can develop their linguistic competence in the target language if they manage to understand a message that includes new structures and words that are a bit beyond the learners’ current levels. However, his view has attracted considerable criticism from SLA researchers. For instance, Swain’s (1985) study of Canadian French immersion classrooms shows that despite years of exposure to acquisition-rich comprehensible input in French, comprehensible input singly did not facilitate L2 learners’ acquisition of French adequately. Learners in such environments were able to accomplish high levels of L2 proficiency in terms of their receptive language skills such as reading and listening, whereas their productive skills were problematic, especially as concerns accuracy. Based on the findings, Swain concluded that in addition to input, output is also necessary to improving learners’ target language proficiency.

In her output hypothesis, Swain (1985) identifies three roles of output: noticing, metalinguistic and hypothesis-testing functions. As for the noticing function of output, she suggests that output gives rise to noticing in producing the target language, which means that learners may notice a gap between what they want to say and what they can say. Such awareness of their lack of knowledge in the target language prompts learners consequently to notice linguistic features in future input, which supposedly foster learning of those linguistic forms. This claim is in line with Schmidt’s (1990, 1994, 2001) noticing hypothesis, which contends that L2 learners must consciously notice forms in the input to acquire the forms. That is, output can serve as a tool to draw learners’ attention to certain linguistic forms, which is a necessary condition for L2 learning.

In addition, according to Swain (1995), as learners reflect upon their own target language use, their output serves a metalinguistic function, enabling them to control and internalize linguistic knowledge. Finally, with regard to the hypothesis testing function of output, producing output is a way of testing a hypothesis about the comprehensibility or linguistic well-formedness of the target language use. Later, Swain (1995) further added another function of output, fluency development, which refers to automaticity in interlanguage production built up through producing the target language. Among the four functions of output, the noticing function of output particularly pertains to the present study. The subsequent section, therefore, will review relevant empirical studies exploring the extent to which output helps learners notice and learn certain linguistic forms.

2.2 Empirical Studies Examining Output as a Noticing-Enhancing Tool

Based on Swain’s argument, L2 researchers have examined whether output, producing the target language, itself helps learners attend to linguistic forms and consequently learn them. Even though output includes both spoken and written modes, it has been more widely investigated in written modality. Studies by Izumi and Bigelow (2000)

and Izumi, Bigelow, Fujiwara, and Fearnow (1999) are among the early empirical studies investigating the noticing function of output. To be more specific, these studies investigated (1) whether output activities promote the noticing of a target linguistic form in subsequent input and (2) whether performing output tasks leads to improved production of the target form. The target structure examined in the studies was the English past hypothetical conditional. In addition to the target structure, the two studies were similar in terms of the methodology adopted. Participants were intermediate learners of English enrolled in a college writing class in the United States, and they were divided into two groups. An output group received opportunities for output, whereas a comparison group engaged in input-based activities. The output group completed two output tasks, namely essay writing and text construction. In the reconstruction task, participants reconstructed a short text after reading it, followed by a second exposure to the same input text and a second chance to reconstruct it. As for the essay writing task, participants wrote about a given topic, followed by the reading of a model written by a native speaker. Participants received a second opportunity to write on the same topic. To measure noticing, participants were asked to underline the target structure in given texts. The comparison group, however, did not engage in any written output activities, but answered reading comprehension questions after being exposed to the same input materials. The only difference between Izumi and Bigelow (2000) and Izumi et al.'s (1999) studies lies in the order of completion of the two output tasks. In Izumi et al., the reconstruction task was given first and then an essay-writing task was provided, whereas Izumi and Bigelow provided the two tasks in a reversed order to see if task ordering affects the findings.

The two studies did not reveal the positive effects of output in promoting the noticing of the form. Moreover, the studies found a mixed result with regard to the acquisition issue: Izumi et al. (1999) revealed that the output group showed greater gains in the accuracy of the production of the target structure than did the comparison group, while Izumi and Bigelow (2000) found no significant differences between the two groups. One possible explanation for the result of Izumi and Bigelow's study is the frequent instances of the target form presented in input materials which might have helped learners in the comparison group pay attention to the form as well. One methodological issue of these two studies is that they investigated the combined effects of the two tasks – namely the reconstruction task and the essay-writing task. It was therefore difficult to estimate which output task is particularly better in the noticing and learning of a grammatical feature.

To resolve this issue, Song and Suh (2008) investigated the effects of types of output tasks as an independent variable. They posited that different output tasks could create different levels in the noticing of certain linguistic features in the input, consequently leading to varied degrees of learning. They particularly focused on two output tasks, a reconstruction task and a picture-cued writing task and examined their effects on noticing and acquisition of English past counterfactual conditional (e.g., *If I had studied harder, I could have done well on the test yesterday.*) Participants were intermediate Korean learners of English. They were divided into two experimental groups and a comparison group. The two experimental groups engaged in either reconstruction tasks or picture-cued writing tasks, while the comparison group did not engage in any output tasks. The study found significant effects of two output tasks on noticing of the target form and use of the form on the posttest compared to the comparison group. However, no clear-cut differences between the two output groups were found in terms of learning. Therefore, the study failed to reveal the relative efficacy of the two output tasks.

The studies reviewed so far examined the noticing and learning of a specific target structure as a result of output, but there are also studies that have investigated the noticing function of output without a target grammatical form. For instance, Hanoka (2007) had Japanese learners of English complete a picture-description task, followed by a provision of model texts, which served as input. Immediately after reading the model texts, the participants were given another opportunity to write about the same picture prompt. The study found that learners noticed their lack of linguistic knowledge at the moment of initial writing. Such awareness was found to push learners to look for

solutions when relevant input was provided in the form of model texts, and later they were able to incorporate vocabulary or grammatical forms presented in the model texts into their subsequent writing.

In sum, in much of the research, different output types of tasks have been used as tools for eliciting learners' output. Output tasks employed include essay-writing, picture description, and reconstruction tasks. Even though these tasks are broadly termed as output tasks, they differ in the sense that they are contrived either to be preceded or to be followed by relevant input. For instance, essay-writing and picture description tasks follow an output-input sequence, whereas reconstruction tasks involve an input-output sequence. As mentioned above, the research failed to converge on the issue as to whether output effectively raises learners' awareness toward a target linguistic form and learning of the form. The inconsistent results may be explained by the effects of output task types related to the sequence of input and output.

To address this issue, the present study examined whether the sequence of input and output could affect learning of a linguistic element. If a differential impact of the sequence of input and output is found, it might have implications for teachers and L2 researchers in helping them to design output tasks. To gain a more complete understanding of (i) the effect of output on noticing and learning and (ii) the effects of output task types related to cycles of input and output, this study addresses the following research questions: (1) Do output-input and input-output learning cycles lead to improving learners' accuracy on production of a targeted form? (2) If both learning cycles lead to improvement in learners' accuracy, which learning cycle—either input-output or input-output—is more effective?

3. Methodology

3.1 Participants and Setting

Participants included sixty-nine female EFL students aged 17 in grade 11 from three intact classes at a public high school in Korea. The total number of participants reported here reflected the exclusion of five participants who missed one of the treatment sessions. The three classes were randomly assigned to one of three treatment conditions: input-output ($n = 23$), output-input ($n = 23$), and comparison ($n = 23$). A one-way ANOVA was used to compare three groups' mean scores on the pretest measuring the ability to use English articles in writing. No significant difference among the group was found, $F(2, 66) = 0.22, p = .80$.

The participants were administered a background questionnaire. They reported information about the age they started to learn English, length of English study, kinds of instruction in English they had received, the number of hours they spent studying English per week, and their levels of interest in the English language. The questionnaire revealed that none had lived in English-speaking countries, and they had been studying English for an average of 8 years at school. All of the participants were comparable with regard to motivation and previous experience with English. The participants did not take an English proficiency test for this study, but their two English teachers reported the English proficiency level of their students ranging from low to high intermediate. The class was mainly conducted in Korean, and there was a penchant to focus on forms. Students mainly practiced specific grammar points or vocabulary items suggested in reading passages and listening scripts. Each class met for 50 minutes four times per week.

3.2 Target Structure

The English articles – *a(n)* and *the* – were selected as the target form in this study. English articles are known to be notoriously challenging for learners, especially those whose first language does not have article systems (e.g., Korean and Japanese) (Master 2002). The selection of the target form was primarily based on error analysis of students' written texts. Articles were found the most common interlanguage error made by the participants. Although articles constituted a structure that the participants had difficulty using correctly, they were likely to have been familiar with the forms of the articles in that they were usually introduced at the beginning level of English textbooks. The target structures were not explicitly taught during the semester when the study was conducted. An analysis of errors from a pretest showed that learners generally made four types of errors with English articles: (a) overuse of the referential definite 'the', (b) overuse of referential indefinite 'a', (c) overuse of the zero article into indefinite contexts, and (d) overuse of the zero article into definite contexts. Examples of each type of error as follows:

- (a) Mark is *the professor of mathematics at Korea University.
- (b) This afternoon I bought a pair of pants, but I don't know where a *pair of pants is.
- (c) Erin found *Ø job with in a travel agency.
- (d) A young man and an old woman were talking outside my office. I think the man was Italian and *woman was French.

Based on the results of the error analysis, the two major functions of articles, "first mention *a*" and "anaphoric second mention *the*," were targeted in the present study. Recent studies have shown that L2 learners' use of English articles, especially the two usages of the article system, is easily amenable to pedagogical interventions (e.g., Rassaei, 2019, Reynolds and Kao 2021, Sheen 2007, Sheen, Wright and Moldawa 2009). Therefore, it could be hypothesized that learners' awareness toward the correct usage of referential indefinite 'a' and referential definite 'the' would be promoted while they engage in output tasks along with the provision of relevant input.

3.3 Materials

In order to elicit article errors in written production, a total of four L1-L2 translation tasks based on Aesop's fables were employed in the study (See Appendix 1). Aesop's fables were adapted and used to provide a realistic context for the use of articles. The four Aesop's fables chosen were "The Dog and His Reflection," "The Fox and the Crow," "The Frog and the Ox", "The Trees and the Ax." The first story was used for a pretest, an immediate posttest, and a delayed posttest, and the remaining three stories were adopted for three treatment sessions. The L1-L2 translation tasks required the participants to translate short Aesop's fables written in Korean into English. The length of the English version of each story was approximately 115 words. To reduce the processing burden on the learners when translating the story, some nouns and phrases without articles were given in English. These nouns and phrases were also given to ensure to elicitation of enough noun phrases with articles. The two English teachers who taught the participants at the time of data collection considered the translation tasks suitable for their students. The English version of each story was prepared as well and served as relevant input. This L2 narrative written input demonstrated the use of indefinite and definite articles (See Appendix 2). On average, each narrative included six indefinite and seven definite articles. An input-output group read an L2 narrative text first and then engaged in the L1-L2 translation, whereas an output-input group completed the translation followed by an opportunity to read

the narrative text. This cycle of treatment was repeated three times. While the experimental groups (the input-output and the output-input groups) engaged in translations tasks, the comparison group engaged only in input-based activities. After reading each narrative text, the comparison group was asked to answer eight comprehension questions.

3.4 Procedure

The study lasted five weeks, with 20 out of 50 minutes taken during regular English class time. A pre-test, an immediate and a delayed post-test were administered to determine the effects of input-output and output-input learning cycles with an interval of two weeks between the immediate and the delayed post-test. An L1-L2 translation task was used as a pre-test to measure learners’ use of English articles. Specifically, the test dealt with the story of “The Dog and His Reflection” (See Appendix 1). The same pre-test was used in an immediate posttest, which was administered followed by a delayed posttest with a two-week interval. Three additional L1-L2 translation tasks were used during the three intervention sessions.

One week after the pre-test, participants in the experimental conditions engaged in either input-output or output-input interventions. Each intervention consisted of three sessions. Participants in the input-output condition first read one of Aesop’s fables and then were instructed to reconstruct the story in English with several nouns and phrases given in English. The output-input group, however, was given the same Aesop fable written in Korean and asked to translate it into English. They were obligated to use some English nouns when translating the text. They were then presented with the English version of the fable and asked to compare it to what they had written. As for the comparison group, they read the same story and completed relevant reading comprehension questions. The two experimental and the comparison groups spent approximately 20 minutes each treatment session. Two days after the last treatment session, an immediate posttest was administered followed by a delayed posttest with a two-week interval. Figure 1 illustrates the procedure of the study.

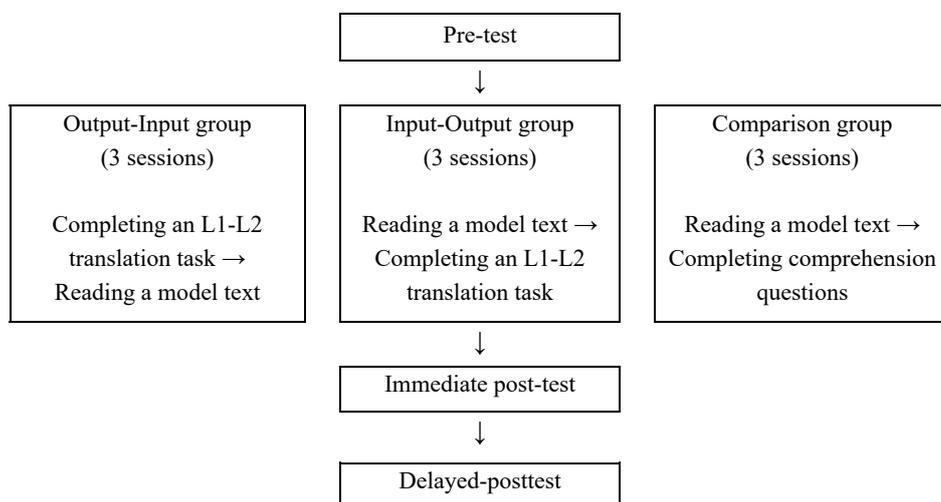


Figure 1. The Procedure of the Study

3.5 Scoring and Analysis

The pretest, immediate posttest, and delayed posttest measured the learners' use of English articles using an L1-L2 translation task. The writing data from each test were coded based on Target-like use (TLU) (Pica 1991) scores. The TLU analysis was adopted because it quantifies learners' use of a target feature by considering overuse of the form. The analysis focused on the learners' use of articles, and participants' scores were calculated as percentages. The scoring formula is presented below:

$$\frac{n \text{ correct suppliance in contexts}}{n \text{ obligagory contexts} + n \text{ suppliance in nonobligatory contexts}} \times 100 = \text{percent accuracy}$$

First, the correct use of articles was counted in obligatory contexts, which became the numerator of a ratio whose denominator was the sum of the number of obligatory contexts for articles and the number of suppliance of articles in nonobligatory contexts. The formula reveals how well L2 learners use an article with regard to where it is and is not required as it captures use and misuse. When written data were analyzed, idiomatic phrases – for instance, at the moment, all of a sudden – were not included from the coding.

As for analysis, all scores were entered into SPSS. Descriptive statistics for pre and posttests were computed, and then a two-way repeated measures ANOVA was employed to analyze the data. ANOVA factors were divided into two types: the treatment conditions, a between-subjects factor (input-output, output-input, comparison groups) and time of assessment, a within-subjects factor (pretest, immediate posttest, delayed posttest).

4. Results

Table 1 presents the descriptive statistics for all TLU scores on the writing test over the three testing periods: pretest, immediate posttest and delayed posttest. As the table shows, the three groups had similar TLU scores at the pretest point, indicating that the participants had similar abilities to use English articles. A one-way ANOVA revealed no statistically significant group differences in the pretest among the three groups, $F(2, 66) = 0.22$, $p = .80$. The two experimental groups, however, performed much better than the comparison group in the immediate and delayed posttests. Specifically, the mean total TLU score by the output-input group consistently outperformed that of the two other groups.

Table 1. Descriptive Statistics for the Total TLU Scores from the Writing Test

Group	Pretest		Posttest 1		Posttest 2	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Output-input ($n = 23$)	27.90	9.00	64.05	13.98	65.74	15.86
Input-output ($n = 23$)	29.90	12.19	61.81	16.17	59.13	20.53
Comparison ($n = 23$)	30.85	13.40	39.55	9.00	40.97	13.45

Note. *M* = mean; *SD* = standard deviation. Maximum possible score is 100.

A two-way repeated measures ANOVA was performed to confirm this observed trend. Table 2 presents the results of a two-way repeated ANOVA with total TLU scores as the dependent variable with testing time (pretest,

immediate posttest, and delayed posttest) and treatment condition (output-input, input-output, comparison) as independent variables.

Table 2. Repeated Measures ANOVA of the Total TLU Scores

	<i>Df</i>	<i>F</i>	<i>p</i>
Between learners			
Treatment	2	5.67	.01
Error	66	(620.9)	
Within learners			
Time	1.92	116.7	<.001
Time * treatment	3.74	17.2	<.001
Error	137.7	(41.3)	

As Table 2 shows, the three groups' performance diverged on total test scores, suggesting a significant effect for treatment. Also, a significant interaction between time and treatment was found. To statistically investigate the differences between pairs of groups, multiple post-hoc comparisons were run. One-way ANOVAs with the post-hoc comparisons found that the differences in total TLU scores were statistically significant in both immediate, $F(2, 66) = 5.60, p < 0.01$, and delayed posttest, $F(2, 66) = 10.12, p < 0.01$. As shown in Table 3, the post-hoc tests with a Tukey HSD adjustment revealed that both input-output and output-input groups outperformed the comparison group in the immediate posttest, and the output-input group performed significantly better than the input-output group on the two posttests.

Table 3. Summary of Significant Contrasts Detected by Post Hoc Analysis

	Total TLU scores		
	Input-output vs. Output-input	Output-input vs. Comparison	Input-output vs. Comparison
Posttest 1	*OI > IO	**OI > C	**IO > C
Posttest 2	**OI > IO	**OI > C	**IO > C

Note. OI = Output-input group, IO = Input-output group, C = Comparison group; * $p < .05$, ** $p < .01$

5. Discussion and Conclusion

This study set out to investigate the effects of learning sequence of output and input on accuracy of English articles in intermediate EFL learners' written production. The first research question posed was: Do output-input and input-output learning cycles lead to improve learners' accuracy on the production of a targeted form? Results of the present study showed that participants who engaged in both input-output and output-input learning cycles performed significantly better than those in the comparison group on the post-tests. The results are in line with previous studies revealing that output tasks are more effective than non-output tasks in facilitating development of learners' production of a target form (Izumi et al. 1999, Song and Suh 2008). It should be noted that in the study conducted by Song and Suh (2008), participants who had output opportunities performed significantly better than

those in the non-output conditions only on the production post-test and that no differences were found in the receptive knowledge test. The finding also suggests that output tasks seem to promote production skills in particular rather than receptive skills. The transfer of the appropriate processing (TAP) (Morris, Bransford and Franks 1977) model offers a way to explain why both intervention groups that completed output tasks produced the target forms more accurately than the comparison group. TAP suggests “skills learned in a certain condition are best transferred to a similar condition” (Lyster and Sato 2013, p. 80). In the present study, both input-output and output-input groups engaged in output tasks and therefore, they produced English articles better on the posttests that measured the use of the forms in writing than those in the comparison group who did not have a chance to do so.

The second research question posed in the study was: If both learning cycles lead to improved learner accuracy, which learning cycles – either output-input or input-output – is more effective? The findings indicate that learners who engaged in the output-input learning sequence did significantly better than those involved in the input-output learning sequence on the post-tests. It suggests that having learners produce first, and then providing them with relevant input was effective in developing the learners’ ability to use the target form more accurately. This result can be explained by Swain’s account of the role of output in noticing. Swain (1995) argued that input provided immediately after output allowed learners to notice the linguistic discrepancy between their output and subsequent input. In this study, all participants in the experimental groups were of similar level of proficiency and received the same tasks involving identical writing and reading materials even though the order of presentation of the tasks was reversed. Therefore, the sequence of output and input could have been seen as responsible for the use of English articles. Therefore, the results of this study provide evidence that the output-input learning cycle resulted in improved noticing of the forms and production of the target features. SLA research involving spoken output has also shown that the provision of input right after giving learners an opportunity to produce a target linguistic feature facilitates learning of the form compared to the provision of input first. Herron and Tomasello (1988) found that a group who received relevant input after a speaking task outperformed a group who received a priori model examples of the target form in a study investigating the acquisition of French negation and a direct object pronoun. The finding supports that the output-input learning cycle serves to facilitate learners’ use of grammatical forms.

From a pedagogical perspective, the implication for instructors is that output tasks can be adapted in ways that accommodate L2 grammar learning. The study results indicate that the output-input sequence, writing and reading relevant input, may increase learners’ attention to linguistic forms compared to the input-output cycle. Accordingly, to draw learners’ attention to linguistic structures, the teacher may provide writing activities first before giving them relevant input.

When interpreting the study’s findings, several limitations should be considered. First, caution is needed in generalizing from it. The study features only Korean intermediate-level learners of English. It is possible that the input-output cycle works better for other groups of learners, such as beginners who do not have enough L2 knowledge to produce it. Moreover, learners whose L1 has article systems could benefit more from the input-output cycle. Thus, future studies might investigate learners at different levels of English proficiency or learners whose native language has article systems so that results can be generalized.

A second important caution is related to interpreting the function of articles. The current study operationalized articles as systems with two binary functions. However, English articles encode more than two meanings in different contexts. Thus, the current results might not be replicable when investigating other functions of articles.

Third, the study also has a methodological limitation. Research using more diverse tasks both in oral and written modes needs to be conducted in order to measure pedagogical effects of the input-output combination in a more

valid manner. This study used one task measuring the learners' ability to produce English articles. Employing additional tasks, such as spoken narration tasks and grammaticality judgement tasks, might have added to assessing learner performance with English articles in a more valid way. The interlanguage article system cannot be properly measured through a single task and, therefore, future studies can use diverse tasks to explore learners' performance with articles. In addition, the study only focused on quantitative analysis, but the qualitative analysis of interview data will reveal the reasons for the learners' selection of certain English articles. Thus, multiple data-elicitation measures or analyses can provide a much richer picture of learners' use of L2 articles.

References

- Doughty, C. 2001. Cognitive underpinnings of focus on form. In P. Robinson, ed., *Cognition and L2 Instruction*, 206-257. Cambridge: Cambridge University Press.
- Doughty, C. and J. Williams. 1998. *Focus on Form in Classroom Second Language Acquisition*. New York: Cambridge University Press.
- Gass, S. 1997. *Input, Interaction, and the Second Language Learner*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Herron, C. and M. Tomasello. 1988. Learning grammatical structures in a foreign language: Modelling versus feedback. *The French Review* 61(6), 910-922.
- Han, Z-H. and Y. Sun. 2014. First exposure: A replication of Han and Peverly (2007). In Z-H. Han and R. Rast, eds., *First Exposure to a Second Language: Learners' Initial Input Processing*, 8-40. Cambridge, UK: Cambridge University Press.
- Hanaoka, O. 2007. Output, noticing, and learning: An investigation into the role of spontaneous attention to form in a four-stage writing task. *Language Teaching Research* 11(4), 459-479.
- Izumi, S. 2003. Comprehension and production processes in second language learning: In search of the psycholinguistic rationale of the output hypothesis. *Applied Linguistics* 24(2), 168-196.
- Izumi, S. and M. Bigelow. 2000. Does output promote noticing and second language acquisition? *TESOL Quarterly* 34, 239-278.
- Izumi, Y. and S. Izumi. 2004. Investigating the effects of oral output on the learning of relative clauses in English: Issues in the psycholinguistic requirements for effective output tasks. *Canadian Modern Language Review* 60(5), 587-609.
- Izumi, S., M. Bigelow, M. Fujiwara and S. Fearnow. 1999. Testing the output hypothesis: Effects of output on noticing and second language acquisition. *Studies in Second Language Acquisition* 21, 421-452.
- Krashen, S. 1985. *The Input Hypothesis: Issues and Implications*. New York: Longman.
- Long, M. 1996. The role of the linguistic environment in second language acquisition. In W. Ritchie and T. Bhatia eds., *Handbook of Second Language Acquisition*, 413-468. San Diego, CA: Academic Press.
- Lyster, R. and M. Sato. 2013. Skill acquisition theory and the role of practice in L2 development. In M. G. Mayo, J. Gutierrez-Mangado and M. M. Adrián, eds., *Multiple Perspectives on Second Language Acquisition*, 71-92. Amsterdam: Benjamins.
- Master, P. 2002. Information structure and English article pedagogy. *System* 30, 331-348.
- Morris, C., J. Bransford and J. Franks. 1977. Levels of processing versus transfer appropriate processing. *Journal of Verbal Learning and Verbal Behavior* 16(5), 519-533.
- Pica, T. 1991. Foreign language classrooms: Making them research-ready and researchable. In B. Freed, ed, *Foreign Language Acquisition Research and the Classroom*, 393-412. Lexington, MA: D.C. Heath.

- Qi, D. S. and S. Lapkin. 2001. Exploring the role of noticing in a three-stage second language writing task. *Journal of Second Language Writing* 10(4), 277-303.
- Schmidt, R. 1994. Deconstructing consciousness in search of useful definitions for applied linguistics. *AILA Review* 11, 11-26.
- Schmidt, R. 1990. The role of consciousness in second language learning. *Applied Linguistics* 11, 129-158.
- Schmidt, R. 2001. Attention. In P. Robinson, ed., *Cognition and Second Language Acquisition*, 3-32. Cambridge: Cambridge University Press.
- Sharwood Smith, M. 1993. Input enhancement in instructed SLA: Theoretical bases. *Studies in Second Language Acquisition* 15, 165-179.
- Sheen, Y. 2007. The effect of focused written corrective feedback and language aptitude on ESL learners' acquisition of articles. *TESOL Quarterly* 41, 255-283.
- Sheen, Y., D. Wright and A. Moldawa. 2009. Differential effects of focused and unfocused written correction on the accurate use of grammatical forms by adult ESL learners. *System* 37, 556– 569.
- Schwartz, B. 1993. On explicit and implicit data effecting and affecting competence and linguistic behavior. *Studies in Second Language Acquisition* 15, 147-163.
- Song, M. J. and B. R. Suh. 2008. The effects of output task types on noticing and learning of the English past counterfactual conditional. *System* 36(2), 295-312.
- Swain, M. 1985. Communicative competence: Some roles of comprehensible input and comprehensible output in its development. In S. Gass and C. Madden, eds., *Input in Second Language Acquisition*, 235-253. Rowley, MA: Newbury House.
- Swain, M. 1995. Three functions of output in second language learning. In G. Cook and B. Seidhofer, eds., *Principles and Practice in Applied Linguistics: Studies in Honour of H.G. Widdowson*, 125-144. Oxford, UK: Oxford University Press.
- Rassaei, E. 2019. Computer-mediated text-based and audio-based corrective feedback, perceptual style and L2 development. *System* 82, 97-110.
- Reynolds, B. L. and C. W. Kao. 2021. The effects of digital game-based instruction, teacher instruction, and direct focused written corrective feedback on the grammatical accuracy of English articles. *Computer Assisted Language Learning* 34(4), 462-482.
- Uggen, M. S. 2012. Reinvestigating the noticing function of output. *Language Learning* 62(2), 506-540.

Examples in: English
Applicable Languages: English
Applicable Level: Tertiary

Appendices

1. An example of a L1-L2 translation task

◆ 다음은 여우와 까마귀에 관한 이솝 우화이다. []안의 영 단어를 사용하여 영어로 문장을 작성하시오.

The Fox and The Crow

1 부리에 치즈 한 조각을 가지고 있는 까마귀 한 마리가 나뭇가지 위에 앉아 있었다. 2 여우 한 마리가 다가와 까마귀를 보았다. 3 여우는 까마귀가 음식을 자신과 나누지 않을 것을 알았다. 4 따라서 여우는 까마귀에게 칭찬을 하기로 결심했다. 5 여우는 나무 밑에 서서 말했다, “얼마나 아름다운 새인가! 만약 그의 목소리가 그의 날개만큼 아름답다면, 그는 최고의 새일 텐데.” 6 까마귀는 이 칭찬에 우쭐해져서 여우에게 얼마나 아름답게 자신이 노래를 부를 수 있는가를 보여주기 위해 부리를 열었다. 7 물론, 치즈가 땅에 떨어졌다. 8 여우가 그것을 잡고, 웃으면서 말했다, “칭찬에 속지 말아라.”

*crow: 까마귀

*beak: 부리

*compliment: 칭찬

*flattered: ~에 우쭐한

1 [crow/ was sitting on/ branch/tree/piece of cheese/its beak]

2 [fox/came up]

3 [fox/knew/crow/would not/share/food/with him]

4 [So/fox/decided/give/compliments/crow]

5[stood/under/tree/and said/what/beautiful/bird/If/as beautiful as/feathers]

6[crow/flattered with/and opened his beak/show/how beautifully he could sing]

7[of course/cheese/fell/ground]

8[grabbed it/laughing/don't get fooled/compliments]

2. An example of L2 narrative input

A crow was sitting on a branch of a tree with a piece of cheese in its beak, and a fox came up and saw him. The fox knew the crow would not share his food with him. So the fox decided to give some compliments to the crow. He stood under the tree and said, “What a beautiful bird! If only his voice was as beautiful as his feathers, he would be the best bird!” The crow was flattered with this and opened his beak to show the fox how beautifully he could sing. Of course, the cheese fell to the ground. The fox grabbed it and said, laughing, “Don’t get fooled by compliments.”

*beak: 부리

*crow: 까마귀

*compliment: 칭찬

*flattered: ~에 우쭐한

◆ 위의 이야기를 읽고 다음 문제 (1~8 번)에 답하십시오.

1. The crow had _____

- a. a mouse.
- b. a piece of apple.
- c. a piece of cheese.

2. As the crow sat there, who came up?

- a. a blackbird
- b. a rooster
- c. a fox

3. The fox wanted _____

- a. a crow dinner.
- b. to sit in the tree.
- c. to have the cheese.

4. The fox began to flatter the crow. What does flatter mean?

- a. to tell lies
- b. to move his wings
- c. to talk about how great another is

5. The flattering of the fox was about the crow's _____

- a. cheese.
- b. cleverness.
- c. beautiful voice.

6. The crow felt flattered and began to sing to show how beautiful his voice was. When he did this, what happened?

- a. His voice was beautiful.
- b. The cheese fell to the ground.
- c. The fox sang with him.

7. The fox said the crow had a voice but was not _____

- a. hungry.
- b. smart.
- c. beautiful.

8. We should be careful of flattery because _____

- a. the person is just telling lies.
- b. the person wants something from you.
- c. the person is too proud to admit you are right.