英語の冠詞学習におけるアウトプット活動と明示的文法説明の効果

The Effects of Output and Explicit Metalinguistic Explanation on the Acquisition of English Articles

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ABSTRACT

The current study investigated the extent to which an output activity in the form of a text reconstruction task facilitated the acquisition of English articles and the extent to which explicit metalinguistic explanation along with the output activity helped promote such acquisition. A quasi-experimental study was conducted involving 32 participants in two intact classrooms in a Japanese private high school. Instructional treatments consisted of the provision of a text reconstruction task and explicit grammar explanation. One experimental group received a text reconstruction task, which was followed by a brief explicit metalinguistic explanation while the other experimental group was engaged in a reconstruction task only. Written picture description tasks and grammatical judgment tests were given as a pretest and a post-test. The results of paired samples t-tests revealed the positive effect of the output activity. However, the study failed to support the assumption that output followed by explicit metalinguistic explanation produced greater improvements than output alone.

本研究では，アウトプット活動（Text Reconstruction Task）と明示的文法説明が英語の冠詞学習にどれだけ有効であるかを検証した．参加者は32人の日本人高校生で，クラスごとに２つのグループに分け，１週間に一回ずつ，計４回にわたりアウトプット活動（Text Reconstruction Task）に参加してもらった．さらに，２つのグループのうち，１グループはアウトプット活動を行った後に，英語の冠詞に関する明示的な文法説明を与えた．冠詞の習得度は２種類のテスト（文法性判断タスク，文字による絵描写タスク）で測定した．T検定の結果，両方のグループにおいて，事前テストと事後テストの間に有意差が見られ，これはアウトプット活動の有効性を示唆していると考えられる．しかし，明示的文法説明の効果は見られなかった．

Introduction

In the field of second language acquisition research, the significance of output activities[1] as opposed to input-based activities has recently gained increasing attention (Izumi, 2002; Izumi & Bigelow, 2000; Izumi, Bigelow, Fujimori, & Fearnow, 1999; Swain, 1993, 1995, 1998; Swain & Lapkin, 1995, 2001). The findings of the studies conducted in French immersion programs in Canada revealed that the comprehension skills of a second language (L2) learners have developed to a level comparable to native speakers; however, their production skills remained poor and contained persistent incorrect use of basic grammatical features even after 7 years of involvement (Harley & Swain, 1984; Swain, 1985; Swain & Lapkin, 1982). From her classroom observation, Swain (1985, 1991, 1993, 1995, 1998; Swain & Lapkin, 1995) found that what was missing in immersion classrooms was opportunities for output. It was argued that producing language was significant to help L2 learners move to more accurate and target-like production of a target language and it might promote noticing of some problematic linguistic structures. Furthermore, it was proposed that the provision of explicit metalinguistic grammar explanation[2] along with some communicative activities such as output activities was beneficial to enhance accurate production (Norris & Ortega, 2001).

Following these theoretical frameworks, the present study explored the effects of output in the form of a text reconstruction task and of metalinguistic grammar explanation on the acquisition of English articles. In the following sections, literature reviews on the roles of output and explicit metalinguistic explanation are presented, followed by a description of English articles as target linguistic items. Next, research questions, methods, results, and discussion are elucidated.

Roles of Output in Second Language Acquisition

The Output Hypothesis proposed by Swain (1993, 1995, 1998; Swain & Lapkin, 1995) claims that output mainly has three functions[3]: hypothesis formulation and testing, metalinguistic function, and noticing. Among them, the function of "noticing" is the focus of the present study. In producing a target language, L2 learners may encounter a language problem such that they cannot say precisely what they want to say with their available linguistic resources (i.e., noticing the hole). L2 learners, then, notice the gap between what native speakers say and what they can say (i.e., noticing the gap). When this happens, learners may search for relevant linguistic information by means of consolidating existing knowledge or generating new knowledge (i.e., hypothesis formation and testing) in order to fill in the gap or hole in their interlanguage. Furthermore, learners might identify their linguistic problems and search for relevant knowledge with more focused attention on future input. Therefore, under certain circumstances, output activities "may bring to their attention something they need to discover about their second language" (Swain, 1998, p. 67). There is a unique role of output that input alone cannot suffice in L2 acquisition.

The noticing function of output was investigated in a number of studies (Izumi, 2002; Izumi & Bigelow, 2000; Izumi, Bigelow, Fujimori, & Fearnow, 1999; Swain & Lapkin, 1995). The study conducted by Izumi (2002) is the most relevant to the present enquiry. Izumi investigated whether an output task (e.g., a text reconstruction task) and visual input enhancement[4] (e.g., underlining) in isolation or in combination, facilitated noticing and learning of English relative clauses. Both output activities and visual input enhancement (e.g., bolding, capitalizing, or underlining) are assumed to help draw learners' attention to problematic

structures in input. According to Izumi, visual input enhancement induces learners' attention externally while "attention in output arises internally through production processes" (p. 543). It was hypothesized that when these two attention-drawing devices are provided in conjunction, this condition might yield larger degrees of noticing and improvements than other conditions where they are separately provided. The results, however, failed to present the positive effect of output activities and visual input enhancement in combination. A significant difference was not found between the participants who were exposed to both output activities and visual enhancement and those who were exposed only to output activities.

Although the combination of output activities and visual input enhancement did not result in better linguistic performance in the study by Izumi (2002), further investigation into the effects of the combination of other instructional techniques may be valuable. In particular, the present study investigated the combined effects of output activities and explicit metalinguistic explanation, the role of which will be illustrated in the next section.

There is a wide variety of an output activity; the present study employed a text reconstruction task, in which learners read a text, reconstruct the text they have just read, and then, go back to the model text again to make necessary correction. The rationale for the use of this task is that reconstruction may promote learners' noticing and cognitive comparison between their current language use and target-like language use while engaging in building meaningful form-function relationships (Izumi, 2002; Thornbury, 1997).

The Role of Explicit Metalinguistic Explanation in SLA

Explicit metalinguistic explanation usually refers to overt rule explanation. The effect of explicit metalinguistic explanation was explored in a large number of studies (Alanen, 1995; Day & Shapson, 1991; Lightbown & Spada, 1990; Spada & Lightbown, 1993; Williams & Evans, 1998; White, 1991; White, Spada, Lightbown, & Ranta, 1991) based on the premise that explicit metalinguistic explanation is believed to draw learners' attention to target forms. It is claimed that the provision of explicit metalinguistic explanation along with implicit type of input enhancement techniques (e.g., input flood, task essential, and visual input enhancement)[5] may increase the likelihood of noticing and detecting some linguistic properties of input (Fotos, 1993; Schmidt, 1990; Rosa & O'Neil, 1999). The positive effect of the explicit metalinguistic explanation has been generally found in studies investigating the effect of L2 instruction (Norris & Ortega, 2001). Moreover, it has been shown that the combination of explicit type and implicit type of input enhancement techniques are more beneficial than the provision of implicit type alone.

Target linguistic structure

The target forms in the current study were English articles. A reason for the choice of the article system came from a researcher's observation of the persistent article errors appearing in participants' writing tasks. Articles were frequently used, but they were not used in an appropriate way. The present study limited its focus to the use of the articles in written production, and does not include oral production.

A classification system of English articles was proposed by Hueber (1983). In the system, nouns

are classified as plus or minus 'specific referent' ([+/-SR]) and 'assumed known to the hearer' ([+/-HK]). These binary features yield four possible environments. In each environment, one or more articles possibly appear. Lexical properties of the noun (e.g., singular or plural, mass or count) determine the choice of articles. In the current study, the article use with generic nouns ([-SR+HK]) were not investigated since it has been reported that generics are rare in the production of L2 learners (Master, 1990; Whitman, 1974) and there is inherent difficulty in defining [-SR+HK] contexts (discussed in Thomas, 1989). Thus, article use in three linguistic contexts such as [-SR-HK], [+SR-HK], and [+SR+HK] were primarily investigated.

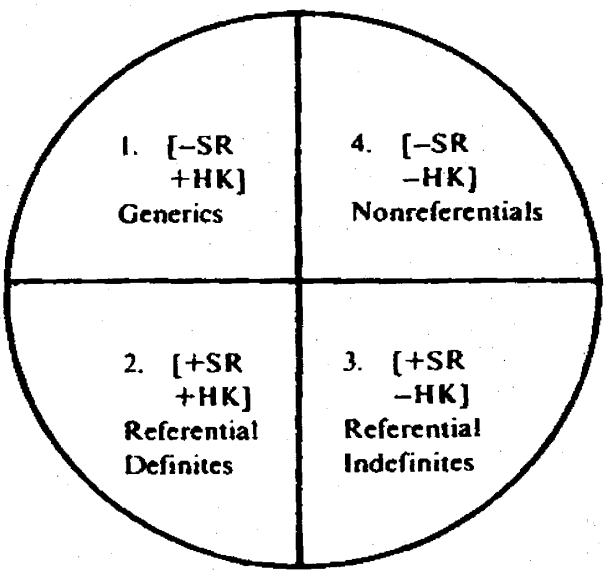

Figure 1. Classification of the English Article System (adapted from Huebner, 1983, p. 146)

Study Method

Participants

The participants of this study were 32 Japanese high school students, with ages 17－18, consisting of two intact classes. All of them were in their senior year.

Research Questions

The following questions were addressed in the study

1. Does output in the form of text reconstruction task promote learning of English article system?
2. Does output followed by explicit metalinguistic explanation produce better improvements than output alone in the acquisition of English articles?

Research Schedule

One week before the instructional treatments began, a pretest was conducted to examine whether two experimental groups were at the same level in terms of article usage. Actual treatments started one week after the pretest. The treatments were provided four times in total with an interval of one week. An immediate post-test was provided right after the final treatment was completed. A delayed post-test could not be provided because of the participants' graduation from the high school.

Descriptions of Instructional Treatment

One experimental group (G1) received a text reconstruction task, which was followed by a brief explicit metalinguistic explanation in the form of handout (see Appendix for Handout) or comments such as "Pay attention to the use of articles" or "Watch for your article errors." On the other hand, the other experimental group (G2) engaged in a reconstruction task only. Table 1 shows the sequence of the treatments.

Language Materials

Four texts were created for this study. Each text contains two or more obligatory contexts where the indefinite, definite, and zero articles (ϕ) have to be used. Two experimental groups were exposed to

Table 1 *Sequence of Treatment*

	Group 1 (G1) (N=19)	Group 2 (G2) (N=13)
Session 1	**Reading a text targeting article use**	
Session 2	**Reconstruction of the text**	
Session 3	**Comparison of their writing with the model text**	
Session 4	**Explicit Metalinguistic Explanation & Comments**	**None**

the same story during the same period of time. An example of the reading text is presented below:

Dr.Smith and Mary live in New Jersey. Their house has a big garden with ϕ trees and ϕ flowers. They like to have a party with their friends in the garden. The party is fun, so everyone likes it.

Measurement

Two types of written measures were used: a grammatical judgment test and a picture description test. These tests are partial constituents of the English Article Diagnostic Test (EADT), originally developed by Muranoi (1996, 2000). Some of the test items were slightly revised to adapt to the level of the participants of the study. The picture description tests intended to elicit 12 indefinite articles and 10 definite articles. The grammatical judgment test comprised of 20 sentences with 40 test items. The test contained 16 ungrammatical items, 11 grammatical items, and 13 distractors. These tests, revised to some extent in each test, were used as a pre-test and a post-test.

Scoring Procedures

The percentages of target-like use (TLU) scores were calculated for both tests[6]. First, the scores for the accurate use of English articles in obligatory contexts are counted, which becomes the numerator of the ratio. The sum of the obligatory contexts and the number of suppliance in non-obligatory contexts becomes the denominator of the ratio. The formula for TLU analysis is presented below:

$$\text{TLU} = \frac{\text{n correct suppliance in obligatory contexts}}{(\text{n obligatory contexts}) + (\text{n suppliance in non-obligatory contexts})}$$

(taken from Pica, 1983, p. 71)

Result of the Pre-test

The results of independent groups *t*-tests revealed that there was no significant difference between two groups for both tests: $t(30) = 1.491$, $p = .146$ for the grammatical judgment test and $t(30) = .917$, $p = .366$ for the picture description test.

Analyses

The TLU scores from the grammatical judgment tests and the picture description tests were submitted to paired samples *t*-tests in order to explore the effect of output. Then, independent samples *t*-tests were preformed on the scores from the post-tests to examine if there is a significant difference between G1 and G2. The analyses were conducted by using the SPSS software. Since the results of the paired samples *t*-tests and the independent samples *t*-tests showed similar results

for the TLU scores on both indefinite and definite article data, the data is jointly presented[7].

Results of Paired Samples T-tests

Grammatical Judgment Tests

Table 2 presents the descriptive statistics for the results of the grammatical judgment tests and the picture description tests. Figure 2 shows the mean TLU scores from the judgment tests. The results of the paired samples *t*-tests revealed that there was a significant difference between the pretest and the post-test in G1, t (18) = -6.486, $p < .05$. With regard to G2, a significant difference was not found, t (12) = -2.089, $p = .059$, although the p-value was very close to the level of .05.

Picture Description Tests

Figure 3 shows the mean TLU scores from the picture description tests. The paired samples *t*-tests presented that a significant difference between the pretest and the post-test existed in both groups: t (18) = -5.320, $p < .05$ for G1 and t (18) = -3.531, $p < .05$ for G2.

Table 2

Descriptive Statistics for the TLU Scores from the Grammatical Judgment Tests and the Picture Description Tests

	G1 (N=19) [Output+Explicit Explanation]		G2 (N=13) [Output only]	
	Grammatical Judgment Tests	**Picture Description Tests**	**Grammatical Judgment Tests**	**Picture Description Tests**
Pretest				
M	**48.45**	**61.66**	**38.12**	**53.31**
SD	**17.546**	**26.501**	**21.569**	**23.380**
Post-test				
M	**72.47**	**83.61**	**57.50**	**71.65**
SD	**21.000**	**21.342**	**25.586**	**18.909**

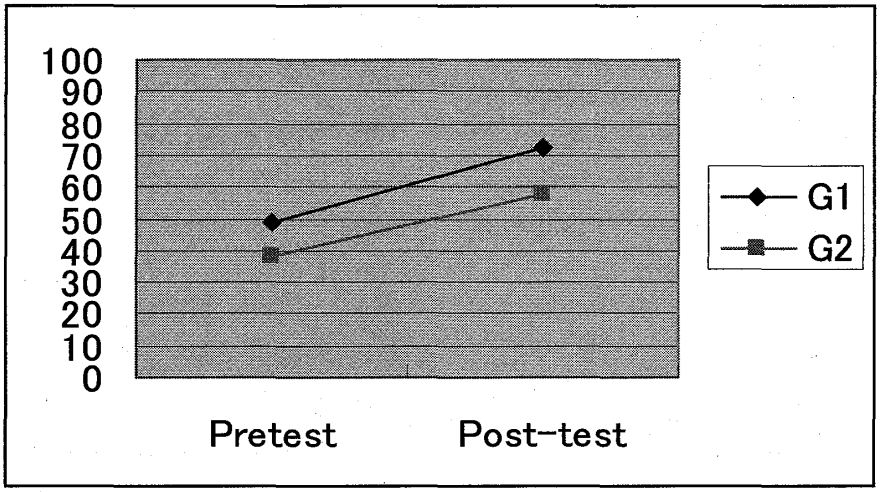

Figure 2. *Mean Scores of the Pretest and the Post-test from the Grammatical Judgment Tests*

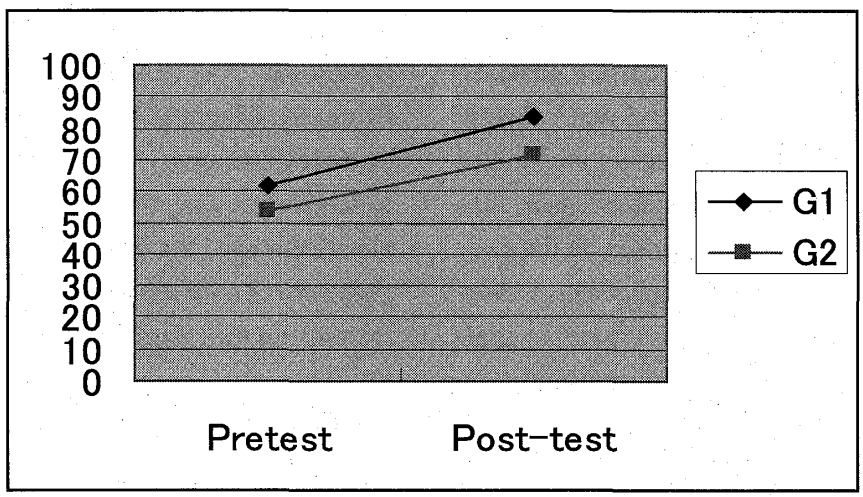

Figure 3. *Mean Scores of the Pretest and the Post-test from the Picture Description Tests.*

Results of Independent Samples T-tests

The independent samples *t*-tests revealed that a significant difference between G1 and G2 was not found in either test.

Discussion

The current study found the immediate positive effect of output activity, namely a text reconstruction task since both G1 and G2 received the output treatment and obtained significant gains between the pre-test and the post-test[8]. It can be said that the text reconstruction task was beneficial in facilitating the learning of the articles. It can be assumed that learners' active involvement in the text reconstruction task might have produced the significant outcome of an increase in the mean score on the post-test for both groups. As discussed by Izumi (2002), Izumi and Bigelow (2000), and Thornbury (1997), it can be stipulated that the noticing function of the text reconstruction might have raised the participants' awareness of English articles and have triggered noticing and subsequent cognitive comparison. Comparing the participants' writings with the model text after the reconstruction may have been quite useful since each participant could immediately receive feedback with respect to their own linguistic problems they noticed while reproducing the target text.

Nonetheless, the study revealed that the condition where the explicit metalinguistic explanation was provided together with the output activity did not result in greater improvement than the condition where the output activity alone was presented. This result was rather surprising since there have been a large number of studies that showed the advantages of explicit metalinguistic instruction over the implicit type of enhancement techniques for L2 learners (Norris & Ortega, 2001). One possible explanation for this outcome may be that the explicit grammar explanation by means of the handout given to G1 was not helpful enough to produce greater gains. The components of the handout might have been complicated for high school students to fully understand. More clear and comprehensive explanation of the handout may have produced different results.

One possible interpretation for the participants' improvement may be discussed in terms of their readiness to acquire the English articles. Over the terms prior to the experiment, the participants in

both groups had made a consistent request to teach them how to use articles in appropriate contexts, though specific instruction was never offered. Their need to use articles appropriately might have risen from regular classroom activities where they had to write a position paper in groups on the topic of each lesson. Their remarks appeared to show that their attention was somehow paid to their problem of using articles. Their requests can be taken as an indication for their readiness to learn this linguistic item at the time of the experiment. It is feasible that their mental readiness played a crucial role in the improvement of the articles.

Conclusion

The results of this study should be interpreted with great caution due to the small sample size of the participants. Also, the study did not include a control group that did not receive any of instructional treatments. The possibility that there may be other factors influencing the results cannot be eliminated. In the future, studies with a control group and randomly selected participants are necessary to draw any firm conclusion on the effect of output activities and of explicit metalinguistic explanation. Nonetheless, the results of this study seem to suggest that having learners involved in a text reconstruction task may be more useful than a mere provision of grammar explanation on articles. There are many possible ways in which forms can be taught within meaningful contexts. An output activity is certainly one such example.

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Endnotes

1 In SLA research, output activities generally indicate speaking or writing; input-based activities refer to listening and reading.
2 Explicit metalinguistic explanation often denotes explicit grammar explanation where metalangauge is used.
3 Skehan (1996) provided six functions of output by integrating the claims made by Swain (1995) and others. Those are: output is useful (1) to generate better input, (2) to force syntactic processing, (3) to test hypotheses, (4) to develop automaticity, (5) to develop discourse skills, and (6) to develop a personal voice (for detailed accounts, see Skehan 1998, pp. 16-19).
4 Visual input enhancement denotes that some structures in a written text are visually enhanced by underlining and bolding on the assumption that L2 learners may pay attention to those forms.
5 For extensive debate on the distinctions between "implicit" and "explicit" type of input enhancement techniques, see Doughty and Williams (1998).
6 This scoring procedure is useful to investigate the accurate use of target grammatical forms; it also accounts for the inappropriate suppliance of target items in inappropriate contexts (Pica, 1983).
7 The present study also conducted separate analyses for TLU scores on the definite and indefinite articles. However, the analyses showed similar results, so the results of each form were jointly presented.
8 Regarding G2, a difference between the pretest and the pos-test in the grammatical judgment test was not significant. However, the p-value was very close to .05, which shows a tendency for positive improvement.

Appendix. Handout given to Group 1 (English Version)
Three Classifications of English Articles (a(an), the, ϕ =zero articles)

+/ —SR (specific) = Hearers can specify a thing or a person from a given context (+) / They cannot specify them (−)
+/ —HK (assumed known to the hearer)
=Hearers are assumed to know a thing or a person that are referred to (+) / They are not assumed to know (−)

Features	Used Articles	Examples
① — SR — HK	a(an), Ø	(1) Alice is a student. (2) I guess I should buy a new car. (3) I want to drink Ø water.
② + SR — HK	a(an), Ø	(1) Christ approached me carrying a dog. (The dog jumped down . . .)
③ + SR + HK	the	(1) (Christ approached me carrying a dog.) The dog jumped down and started barking. (2) I approached his front door and rang the bell. (3) the latest news / the second answer (4) The moon will be full tomorrow (5) (among classmates) The midterm exam is coming soon.

(Adopted from Thomas, 1989)

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