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A Study of the Impact of Integrated Reading-Writing Tasks on Korean EFL Students' Writing Development*

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This study examines the effects of integrated reading-writing tasks (i.e., awareness-raising literacy activity) on Korean EFL college students' writing development and their perception of the task. During a semester, the students mined linguistic, organizational features of text while reading, shared some features they had noticed during the whole class reporting session, and wrote an essay related to the theme of the text read. Data were collected through pre- and post-tests and interviews. A pre-test and a post-test were administered to the students at the beginning and end of a semester, and the test results were contrasted in terms of overall quality of writing, syntactic complexity, accuracy, and fluency. Analysis of essays on pre- and post-tests revealed that the students made significant improvement in overall writing, accuracy, and fluency, but not in syntactic development. Analysis of interview data showed the students positively perceived the integrated reading-writing tasks in relation to enhanced noticing of linguistic features, more opportunities to use the features, and a use of more diverse expressions in their writing. The overall results of the current study support the effectiveness of the integrative approaches to language instruction. It highlights the significance of well-designed integrated literacy tasks for improving students' writing performance.

[reading and writing integration/second language writing/reading for writing/text/ mining]

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I. INTRODUCTION

Traditionally, in both first language (L1) and second language (L2) instructional contexts, reading and writing were perceived as distinct activities and thus taught separately (Hirvela, 2004). Since the late 1980s, however, there has been a growing recognition of close connections between reading and writing (Grabe, 2003; Hirvela, 2004; Langer & Flihan, 2000). Research studies pointed out that good readers tend to be good writers or vice versa. Cummins (1979) proposed theoretical claims that reading and writing are interdependent and that they share common underlying subskills and processes. It was claimed that reading and writing involve cognitive processes related to each other and, thus, reader's reading process is similar to writer's composing process (Carson & Longhini, 2002; Fitzgerald & Shanahan, 2000). In other words, reading and writing are essentially similar processes of meaning construction or similar acts of composing (Tierney & Pearson, 1983).

Based on this notion, a pedagogical claim was raised that integrating reading into writing class could help to promote writing development (Duke & Pressley, 2002; Lightbown, Halter, White, & Horst, 2002; Prowse, 2003; Shanahan, 1990). Hirvela (2004) claimed that teaching reading and writing in a combined way would facilitate the development of writing skills more effectively than teaching writing alone. He further mentioned that EFL students' reading experience tends to affect their writing performances when reading and writing activities are implemented in an integrated way. This claim is in line with Carson and Leki's (1993) argument that reading can be, and nearly always is the basis for writing, particularly in academic settings. As regards the potential benefits of reading for writing, it is claimed that through reading, students can gain exposure to positive input regarding the grammatical usage of the language (Krashen, 2004) and the vocabulary usage (Day, Omura, & Hiramatsu, 1991; Dupuy & Krashen, 1993; Elley, 1989; Hulstijn, 1992; Pigada & Schmitt, 2006; Pulido, 2003), whose knowledge constitutes fundamental aspects of writing competence, and thus develop writing skills more effectively.

Though theoretical connections between reading and writing have been proposed, however, not many research studies have been conducted to empirically explore the connections (Grabe, 2003; Kim 2012). In particular, Grabe (2003) is cautious toward making a sweeping claim as regards the benefits of reading on writing while pointing out a lack of empirical evidence from research studies in the area. Besides, what has been revealed regarding the reading-writing connections came mostly from the studies in L1 contexts, and consequently there is a paucity of research in L2 contexts, particularly EFL contexts (Carson & Leki, 1993; Choi & Sung, 2006; Grabe, 2001, 2003; Hirvela, 2004; Hudson, 2007: Kim & Moon, 2014; Plakans, 2009). Regarding a need for studies in L2

literacy contexts, it has been claimed that studies of the reading-writing connections in different contexts are needed given that research results are influenced by numerous variables, such as the type and length of a writing task and, reading passage, and learners' language proficiency level (Grabe, 2001, 2003). Hence, this study aims to address this gap by exploring an effect of reading-writing integration on English-as-a-foreign-language (EFL) college students' writing performance.

In addition, it is noted that in order to maximize the potential of reading and writing connections for writing development, more systematic, viable reading activities, instead of simply having students read, should be integrated into writing activities (Hirvela, 2004). In response to such a call, this study implemented integrated reading-writing tasks, specifically, awareness-raising literacy activities, in a writing class and investigated their effects on writing development.

II. LITERATURE REVIEW

1. Reading-Writing Connections

Reading-writing connections have captured attention from language researchers and instructors since 1980s. One strand of the early studies explored possible relationships between reading and writing in terms of their underlying knowledge and process, and a great many of those correlational studies showed that better writers tend to be better readers (or vice versa) (Carson, Carrell, Silberstein, Kroll, & Kuehn, 1990; Janopoulos, 1986; Shanahan, 1997; Stotsky, 1983; Tierney & Shanahan, 1991).

Another strand of research focused on the role of one of the skills in supporting the development of the other, in other words, the influence of writing on reading or the influence of reading on writing. Reading-writing connections have usually been approached from a directional perspective in which one skill is seen as facilitative of developing the other, that is, using reading to strengthen writing (i.e., reading to write) or using writing to strengthen reading (i.e., writing to read). Regarding this support role, Grabe and Kaplan (1996) claimed that a reading activity provides input for writing and that writing in turn offers resources for reading. Likewise, Nelson (1998) also portrayed reading and writing as joint acts of composing, highlighting the overlapping nature of the two activities. She explains:

> Now there is an awareness that many acts of literacy are hybrid in nature, in that they involve both composing and comprehending. In these hybrid acts the two processes cannot be neatly separated at some point where one stops and the other

> starts…In such acts, reading and writing processes tend to blur and a person is in two roles concurrently – a reader building meaning from a text and a writer building meaning for a text (p. 279).

On a similar note, Lunsford (1978) even claimed earlier that the writing teacher should automatically be a reading teacher as well.

As regards influences of either reading or writing on the development of the complementary literacy skill, a number of research studies have been conducted in L1 contexts. In consideration of its scope, the current study reviews research only on *reading to write*. In an early study, DeVries (1970) reported that students who did extra reading performed better in expository writing than those who engaged in writing alone. Crowhurst's study (1991) also supported the claim that integrated reading and writing activities enhance writing skills. In a review of existing studies in the field, however, Koons (2008) pointed out that the results of the studies have been mixed. Besides, Taylor and Beach (1984) claimed that students' proficiency level is a critical factor in the influence of reading on writing.

L1 research studies started to heavily influence research and instructional practice in the L2 writing field in the late 1980s. L2 researchers and teachers agreed to the notion that reading and writing abilities are inextricably linked, and further recognized that reading serves as the basis for writing. Such recognition brought about a change in the instructional landscape in the L2 writing classroom where reading had been taught separately from writing. 'Reading for writing' was gradually established as one of the features of L2 writing teaching.

The reading for writing approach receives theoretical support from Krashen (1984). Highlighting the role of input from reading in writing development, Krashen (1984) explains:

> We gain competence in writing the same way we gain competence in oral language: by understanding messages encoded in written language, by reading for meaning. In this way we gain a subconscious "feel" for written language, we acquire this code as a second dialect (pp. 27-28).

According to Krashen, it is reading that allows learners natural, meaningful exposure to writing in the target language. He thus claims that writing instruction should encourage learners to subconsciously acquire and internalize the rules and conventions of writing in the target language through reading. Similarly, Stotsky (1995) observes that reading experience may be the primary source of a writer's lexical, syntactic, and general knowledge of writing.

Research on the influence of reading on writing in L2 context is relatively scarce compared with in L1 context. Of the few, Janopoulos' study (1986) reported that pleasure reading had a positive impact on writing development. Several studies reported that extensive reading also led to L2 writing development (Ferris & Hedgcock, 1998; Grabe & Kaplan, 1996; Renandya, 2006; Tsang, 1996).

Studies conducted in Korean EFL context mostly focused on the effect of summary writing (e.g., Kim, 2001; Kim & Moon, 2014; Ko, 2009; Lee & Min, 2010; Oh, 2007) or reading and journal writing (Choi & Sung, 2006; Song, 2004) on the development of writing skills. The results of those studies pointed out the benefits of summary writing or journal writing as integrated reading and writing tasks in L2 writing development. The current study is distinguished from the previous studies in that it employs newly designed reading-writing integration tasks, which will be described below.

2. Integrating Reading and Writing through Mining

With an increasing awareness of the value of reading in the writing classroom, several 'reading for writing' approaches have been proposed, and 'mining' (Greene, 1993) is one of them. Mining is a direct model of reading for writing, which encourages learners to approach reading from a writer's perspective and thus engage in reading with an intention to learn about writing. The direct model is based on "the belief that students will learn more about writing if they intentionally set out to discover things about writing through reading" (Hirvela, 2004). Mining is an analogy used to describe the process of learners actively searching for information about writing in the text materials just as miners dig out valuable materials in the mines. In this process, the main purpose for reading is to learn about writing.

While 'mining,' learners look for clues about writing including lexical features (e.g., multiple words with similar meanings, use of appropriate words in certain situations), morphosyntactic features (e.g., sentence structures, diverse subordinate clauses, past tense), organizational features (e.g., use of transitional words and phrases, location of topic sentences), stylistic features (e.g., comparative use of formal and informal expressions), and can learn about them. Working as 'miners,' learners can thus accumulate information on L2 writing, which they can use later for writing. Here, learners are not reading the text just for comprehension of its meaning but, rather, more than that, for acquiring knowledge about writing. Therefore, this mining model contrasts with the indirect model of reading for writing in which the primary purpose of reading is comprehending the text, not searching for information about writing, and the acquisition of knowledge about L2 writing is regarded as a natural outcome of reading through exposure to input.

Greene (1993), an advocate of mining, explains, "…mining is part of an ongoing effort to learn specific rhetorical and linguistic conventions. The strategies students observe in reading can become part of their own repertoire for writing on different occasions." (p. 36). While doing a 'mindful study of texts,' learners shift their position from spectators who just passively decode the text to participants who actively engage with the text. Hirvela (2004) explained that mining is a particularly appealing and useful concept in characterizing the features of reading for writing.

In spite of its potential benefits of mining, however, it has also been claimed that directing students' attention to features of texts alone does not guarantee that students will automatically learn about them and become good writers (Hirvela, 2004; Smagorinsky, 1992). It can be easily admitted that applying the knowledge about L2 writing gained through reading to writing is such a challenging task. In the case of L2 writers who may not still have sufficient knowledge about L2, in particular, this claim holds true more strongly. Therefore, Hirvela (2004) claimed that instead of simply assuming that students will learn about writing from reading, teachers should intervene in the process and play a mediating role. For example, teachers can carefully select reading materials appropriate for their students in terms of topic, difficulty level, and length; ask students to take notes or fill out a chart on the peculiar linguistic features of the text while reading; demonstrate the process in advance; have a class discussion of the process; design accompanying writing tasks that intend to have the students use what they learned about while mining in their own writing and thus strengthen the acquired knowledge. With such scaffolding supports, mining will allow students meaningful exposure, instead of superficial exposure, to the elements of L2 writing, whose knowledge is necessary for their own writing.

Against this background, the current study designed an integrated reading-writing task labeled 'awareness-raising literacy activity' based on the mining model and implemented it in a college EFL writing class for a semester. An awareness-raising literacy activity (hereafter ARLA) is defined as a task in which students are encouraged to pay attention to linguistic features of the text, including vocabulary, phrases, sentence structures, and organization, while reading, note the peculiar features observed down, share the features and the reasons why the features captured their attention in a subsequent whole class discussion setting, and write an essay. The current study poses the following research questions:

1. Does awareness-raising literacy activities (ARLA) affect Korean EFL college students' writing development?
2. How do the students respond to the integrated literacy tasks?

III. METHODOLOGY

1. Participants and Setting

Participants in this study were 15 female students in a women's university in Korea. At the time of data collection, the students were enrolling in a one-credit mentor course. In this university, 'mentor courses' are offered as electives with an aim to address students' diverse needs and to provide them with opportunities to establish nurturing relationships with professors as their mentors. Mentor courses have various themes depending on departments in charge, including 'Exploration of Korean Cultural Heritage,' 'Growing as an Interior Designer in the 21st Century,' and 'Career Paths in the Field of Language Education.' This study was conducted in a mentor course titled 'Second Language Writing,' which was offered by the School of English with an aim to improve students' English writing skills.

The students met two hours a week during a 15-week semester except for the midterm and final exam weeks. Three students were seniors, four juniors, six sophomores, and two freshmen. In terms of major, six were majoring English, two economics, two music, two education, two entrepreneurship, and one culture and tourism. Three of the students had experiences of staying in English-speaking countries for more than six months.

The current study did not gain information on the students' English proficiency. From the pre-test scores, however, it is possible to get a glimpse of their proficiency level: scores ranged from 53 to 84, and average score was 74; six students scored below the average and seven students scored above the average.

2. Procedure

The instructor, who is the researcher of this study, designed and taught the mentor course in the fall semester of 2014. In the first week, the instructor explained an ARLA as a 'mining' strategy to the students in detail and demonstrated how it could be conducted. She first gave the students a reading material of about 300 words in length, and then thought aloud vocabulary words, phrases, syntactic structures, or organizational features that she had paid attention to for some reasons while reading, for example, repeated use of a word, topic sentences that appear in an introductory paragraph, occurrences of synonyms, and places where a transitional word occurs. After the demonstration, she asked the students to mine the text individually while reading silently and to note down on a separate piece of paper striking features of writing that they noticed and the reasons why the features captured their attention. After an individual mining was completed, the instructor had the individual students report two features they had mined to the whole class along

with the reasons. During this report session, the students had an opportunity not only to share their features but also to get an exposure to linguistic aspects that the other students became aware of. Striking features that they noticed include a structure of 'so…that…' for its repeated occurrences in a single text and a word of 'however,' which sounded more formal than 'but.' In the last phase of the class, the students were required to write an essay for approximately 20 to 30 minutes on a topic related to the text that they had read.

Starting the second week, the course proceeded in much the same way as in the first class. With two or three weeks of practice, class routines and procedures were soon established, and the students followed the same basic instructional procedure throughout the semester: as soon as they came to the class, the students were given a reading material that the instructor had taken out of ESL reading books, mined the text while reading, took turns to report their mining results a couple of times in English, wrote an essay on a given topic, and submitted their handwritten essays to the instructor. The students were not given feedback on their essays. The length of the completed essays varied from a half page to two pages according to topics and the students' proficiency level.

The instructor chose reading materials in consideration topics, difficulty level, and linguistic features. Table 1 shows a list of titles of the reading materials.

TABLE 1

A List of Titles of Reading Materials

Week	Title
1	The Spread of Hip Hop Culture
2	What is your EQ?
3	Musical Elephants
4	The Taj Mahal: A marble Masterpiece
5	Same Movie, Different Name
6	The Wrong Stuff
7	Peter Pan Syndrome
9	The Influence of Toys
10	The Characteristics of Rites of Passage
11	Big Winners – or Big Losers?
12	The Benefits of Olive Oil
13	The Importance of Grandmothers
14	Job Skills

During the whole class reporting session, the instructor frequently made comments on the linguistic features that the students had mined. Throughout the semester, the instructor delivered all the instructions in Korean.

3. Data Collection

Data for the study collected include 1) essays that the students wrote in the first week as pre-test, 2) essays that they wrote in the final week as post-test, and 3) focus group and individual interviews.

In the first week, the instructor asked the students to write an essay in English for 30 minutes on a given prompt, 'Some people say that it is better for children to grow up in the countryside than in a big city. Other people say the opposite. What is your opinion?' This essay writing took place before the instructor demonstrated ARLA as a mining strategy. These essays served as baseline data showing the students' initial level of English writing proficiency.

Similarly, in the final week, the instructor required the students to write an essay for 30 minutes. This time, the prompt was 'Some people say that it is better to take music, art, and PE classes out of secondary school curriculum and instead to use the class time for teaching main school subjects, such as mathematics, science, and English. Other people say the opposite. What is your opinion?' These essays were compared with the ones that the students had written in the first week to investigate any impact of ARLA on their writing improvement. Though there were 15 students in the class, only 13 students' essays were used as data for this study as one student joined the class in the second week and another student did not show up in the final week.

Finally, after the semester was over, the instructor had two focus group interviews with three students each and interviews with four individual students. Focus group interviews were conducted with the two groups of students who were in the same major and close to each other. For the individual interviews, the instructor chose the students considering their majors and academic years, so that she could get opinions from various students. Focus group and individual interviews took place in the instructor's office for 15 to 30 minutes. The interviews took a form of semi-structured interviews: the instructor conducted the interviews using a list of questions prepared in advance, but she also asked additional questions based on students' answers whenever necessary. Interview questions include 'What difficulties did you usually experience in English writing?' 'Which linguistic features did you pay attention to most during ARLA?' 'What is your experience with ARLA? How would you describe your ARLA experiences?' and 'Did ARLA help you in your English writing? Why or why not?'

4. Data Analysis

In order to measure the quality of writing, two native speakers of English rated student essays in the form of pre- and post-tests using a 100-point rubric by Hedgcock and Lefkowitz (1992) (Appendix A). The essays were scored with respect to five dimensions –

content, organization, grammar, vocabulary, and mechanics – and a total score was obtained for each essay. The two raters had been teaching English at a Korean university for nine to eleven years respectively and involved in rating English tests for more than nine years at the time of data analysis. They rated two essays of each student's individually, and the mean score was used as the score of each student. The achieved inter-rater reliability was as follows:

TABLE 2

Achieved Inter-rater Reliability

Area	Content	Organization	Grammar	Vocabulary	Mechanics	Total
Pre-test	.790	.882	.893	.815	.912	.895
Post-test	.834	.936	.924	.876	.922	.914

In order to further explore any effect of ARLA on the development of writing skills, the current study contrasted essays on pre- and post-tests in terms of syntactic complexity, accuracy, and fluency. Syntactic complexity is defined as "the range of forms that surfaces in language production and the degree of sophistication of such forms" (Ortega, 2003). Accuracy is defined as "freedom from error" (Foster & Skehan, 1996) or "the degree of deviancy from a particular form" (Wolfe-Quintero, Inagaki, & Kim, 1998). Fluency refers to "a measure of the total number of words or structural units" which a person uses in his/her writing within a given time (Wolfe-Quintero et al., 1998), and thereby a lack of fluency means that "only a few words or structures are accessed in a limited time (Foster & Skehan, 1996). Syntactic complexity, accuracy, and fluency have been predominantly used as measures to assess L2 learners' language development since the 1990s (Skehan, 2009).

To assess syntactic complexity, clause per T-unit (C/T) and dependent clause per T-unit (DC/T) were used as measurements; for accuracy, errors per T-unit (E/T) and error-free T-unit per T-unit (EFT/T) were used; to assess fluency, the number of total words (W) and words per T-unit (W/T). These measures were selected as they are regarded as the best indicators of the development of each dimension (Bardovi-Harlig & Bofman, 1989; Ellis & Yuan, 2004; Foster & Skehan, 1996; Ishikawa, 2006; Kormos & Trebits, 2012; Kuiken & Vedder, 2007; Rahimpour & Hosseini, 2010; Robinson, 1995; Wolfe-Quintero, Inagaki & Kim, 1998; Yuan & Ellis, 2003). A summary of the measurements is given in Table 3.

TABLE 3

Measures of Syntactic Complexity, Accuracy, and Fluency

Syntactic complexity	Accuracy	Fluency
Clause/T-unit (C/T-unit)	Errors/T-unit (E/T)	Words (W)
Dependent Clause/T-unit (DC/T)	Error-free T-unit/t-unit (EFT/T)	Words/T-unit (W/T)

IV. FINDINGS

1. Overall Writing Improvement

As stated earlier, each student wrote two essays, one as a pre-test and one as a post-test, apart from weekly essays, and the pre- and post-test essays were scored discretely in terms of content, organization, grammar, vocabulary, and mechanics. Scores on pre- and post-tests were contrasted to examine any effect of ARLA on the enhancement of overall writing skills. Table 4 shows the results.

TABLE 4

Results of Discrete Scored Writing Quality

Area	Full Score	Pre-test	Post-test	Difference	z	p-value
		M (SD)	M (SD)	M (Std.Err)		
Content	30	21.5(3.79)	23.31(3.17)	1.81(0.66)	2.40	0.009**
Organization	20	15.19(2.05)	16.23(2.31)	1.04(0.43)	1.96	0.025*
Grammar	20	15.08(2.30)	15.88(2.27)	0.81(0.36)	2.00	0.023*
Vocabulary	25	18.0(3.05)	19.73(2.44)	1.73(0.49)	2.59	0.005**
Mechanics	5	4.04(0.48)	4.31(0.52)	0.27(0.13)	1.90	0.029*
Total	100	73.8(11.00)	79.46(9.54)	5.65(1.50)	2.94	0.002**

*p<0.05, **p<0.01

The students performed better in the post-test essay writing compared with the pre-test writing in all the dimensions under study (i.e., content, organization, grammar, vocabulary, mechanics, and total). Scores of the dimensions all improved from pre-test to post-test, and the changes were statistically significant. The mean changes were 1.81 in the area of content ($z=2.4$, $p<0.01$), 1.04 in the area of organization ($z=1.96$, $p<0.05$), 0.81 in the area of grammar ($z=2$, $p<0.05$), 1.73 in the area of vocabulary ($z=2.59$, $p<0.01$), 0.27 in the area of mechanics ($z=1.9$, $p<0.05$), and 5.65 in the total score ($z=2.94$, $p<0.01$).

In order to explore any effects of ARLA on the development of syntactic complexity, accuracy, and fluency in writing, the current study further analyzed pre- and post-test essays in terms of six measurements (i.e., clause per T-unit and dependent clause per T-

unit for complexity; errors per T-unit and error-free T-unit per T-unit for accuracy; words and words per T-unit for fluency). Results of data analysis are provided in Table 5.

TABLE 5

Results of Syntactic Complexity, Accuracy, and Fluency

Area	Measure	Pre-test	Post-test	Difference	z	p-value
		M (SD)	M (SD)	M (Std.Err)		
Syntactic Complexity	C/T	1.46(0.21)	1.61(0.38)	0.15(0.12)	1.22	0.111
	DC/T	0.44(0.19)	0.61(0.38)	0.17(0.11)	1.43	0.076
Accuracy	E/T	0.77(0.30)	0.56(0.41)	-0.21(0.09)	-2.06	0.020*
	EFT/T	0.45(0.15)	0.58(0.17)	0.13(0.05)	2.20	0.014*
Fluency	W	219(43.12)	303(95.55)	84(22.87)	2.90	0.002**
	W/F	14.6(2.87)	20.2(6.37)	5.6(1.52)	2.90	0.002**

*p<0.05, **p<0.01

With regard to syntactic complexity, the number of clauses per T-unit increased by 0.15 from 1.46 to 1.61, and the number of dependent clauses per T-unit increased by 0.17 from 0.44 to 0.61. As stated earlier, these measurements (i.e., C/T, DC/T) are considered reliable indicators of syntactic complexity. Wolfe-Quintero, Inagaki and Kim (1998) claimed that as learners' language proficiency level goes up, C/T and DC/T rises linearly. These increases may imply that the students improved their abilities to write complex sentences containing subordinate clauses. In this study, however, the increases are not statistically significant.

As regards accuracy, the number of errors per T-unit dropped from 0.77 to 0.56, which marks a decrease by 0.21. This decrease means that the students made fewer errors in the post-test than in the pre-test. Alongside, the analysis of error-free T-unit per T-unit revealed that the mean change was made from 0.45 to 0.58 (increase by 0.13), which shows that the students wrote more T-units without errors. The mean changes in errors per T-unit ($z=-2.6$, $p<0.05$) and error-free T-unit per T-unit ($z=2.20$, $p<0.05$) are statistically significant. These two measurements reflect the overall accuracy of written production (Kuiken & Vedder, 2007). Taken together, the data analysis reveals that the students wrote more accurately in the post-test than in the pre-test.

Finally, regarding fluency, the students made statistically significant changes in both the number of words written ($z=2.90$, $p<0.001$) and the number of words per T-unit ($z=2.90$, $p<0.001$). The post-test essays were longer than the pre-test ones by 84 words (pre-test: 219; post-test: 303), which means that compared with the pre-test, the students wrote more words in the post-test. On the same token, the number of words per T-unit also increased by 5.6 from 14.6 to 20.2. This change points to the fact that the students wrote longer T-units, which contain more number of words, during their post-test writing. The data analysis shows that the students made significant improvements in their writing in terms of fluency.

2. Student Perception of ARLA

The vast majority of the students interviewed expressed positive responses to ARLA during the interviews. The most frequently mentioned benefit of ARLA is a better memory of the linguistic features noticed. Analysis of interview data revealed that ARLA helped the students to pay close attention to various features of writing including lexical, syntactic expressions and organizational characteristics while mining, which consequently facilitated their memory of those features. One student mentioned:

> During ARLA, I became aware of many linguistic features, which otherwise might go unnoticed. I underlined them in an essay and took notes on them in my journal. Also, listening to the features during the whole class reporting session that the classmates had noticed gave me additional chances to become aware of other useful expressions. Thanks to the process, I was in a better position to remember those linguistic features (Ji Eun, English major, junior)

Another benefit was related to greater opportunities to use the linguistic features in their subsequent writing. As mentioned earlier, each week, after the students were engaged in ARLA, they wrote an essay on a topic related to the reading material. During the interviews, many students mentioned that due to ARLA, they memorized some of the features better that they had become aware of, and could use them in their own writing. The students reportedly had practical opportunities to apply noticed or even possibly memorized input to their writing performances. This process might strengthen the knowledge and facilitate the acquisition of those linguistic features. One student commented:

> In general there are many words whose meaning I can understand by sight but which unfortunately I can’t use in my speech or writing. With the help of ARLA,

> particularly checking in the whole class setting, I could actually use some of them in my own writing. That was something. (Hajin, Economics major, junior)

This student was aware of a gap between comprehension knowledge and production knowledge. It has well been noted that abilities to produce language are smaller than those to comprehend language (Grabe, 2008). ARLA led the students to actually use comprehension knowledge for production, which accordingly could narrow the gap between the two different types of knowledge.

Similarly, another student said:

> We had a class only two hours a week. I used to think it's very difficult to improve writing skills in a short time but now I think it is possible. We had a class only two hours a week, but I felt my writing abilities were growing rapidly with ARLA. ARLA was more effective than I expected. An ARLA cycle of individual attention focusing on linguistic features followed by whole class discussion and subsequent writing helped me to notice language forms and use them. (Mijin, Music major, sophomore)

Final benefit the students frequently mentioned is concerned with a use of a greater variety of expressions. Some students commented that ARLA enabled them to use various expressions, which were not available to them earlier. One student mentioned:

> During ARLA, I often noticed that the writers had used different expressions to refer to the same objects or concepts. I used to depend on a limited number of expressions and used the same expressions repeatedly; however, I learned a lesson of the need for using various synonyms for better writing, and I expanded my reservoir of English expressions through ARLA from which I could draw synonyms. For example, I first used difficulty and then moved on to challenge. (Yujin, English major, junio)

V. DISCUSSION

Guided by a theoretical underpinning on the interrelationships between reading and writing skills, the current study examined whether a particular literacy activity, ARLA, has an impact on the development of writing skills. This study further investigated student perceptions of ARLA.

Analysis of the essays on the pre- and post-tests in terms of overall writing quality revealed that the students' writing proficiency was enhanced after they were engaged in ARLA. Scores of each writing assessment dimension (i.e., content, organization, grammar, vocabulary, mechanics, and total) on the post-test essay all increased and made statistically significant differences compared with on the pre-test essay. Based on the results, the current study claims that ARLA positively affected the students' overall writing development.

Furthermore, this study analyzed the two essay sets to explore whether the students made improvements in terms of syntactic complexity, accuracy, and fluency as a result of ARLA. In the field of writing research, these three dimensions are regarded as the most reliable indicators of language development (Bardovi-Harlig & Bofman, 1989; Ellis & Yuan, 2004; Foster & Skehan, 1996; Homburg, 1984; Ishikawa, 2006; Kormos & Trebits, 2012; Kuiken & Vedder, 2007; Rahimpour & Hosseini, 2010; Robinson, 1995; Wolfe-Quintero et al., 1998; Yuan & Ellis, 2003). In order to measure development in these three dimensions, this study adopted six measures – two for each dimension (C/T and DC/T for syntactic accuracy; E/T and EFT/T for accuracy; W and W/T for fluency), which are widely used as indicators of each dimension.

Results of data analysis showed that the test scores improved in all the six measurements though the score differences are not statistically significant in the aspects of syntactic complexity. The finding that the students failed to make significant improvements in syntactic complexity while they significantly developed accuracy and fluency is in line with Wolfe-Quintero et al.'s claim (1998) that syntactic complexity tends to make the slowest development. Furthermore, this finding can be partly explained by the claim that ESL advanced learners tend to use fewer clauses and, instead, more reduction forms (e.g., phrase), which might negatively affect measures of syntactic complexity (Lu, 2011; Ortega, 2003; Wolfe-Quintero et al., 1998). It can be conjectured that some advanced students in the current study used fewer clauses or dependent clauses, which may have led to no significant improvement in syntactic complexity. Or another possible explanation may be that the students did not attempt to use many syntactically complex sentences to write on informal topics since those sentence structures, in general, are not extensively used in non-academic, informal type of writings. Meanwhile, fluency sharply increased, whose finding is consistent with the claim that fluency tends to develop fastest among the three dimensions of language (Ortega, 1999).

Taken together, these results indicate that overall, ARLA, an integrated reading-writing task with a special focus on awareness raising, had a positive effect on students' writing development. Such development can be accounted for by a couple of theoretical insights. First, during ARLA, the students were exposed to language input about reading and writing and processed the information internally. Krashen (1985) claims that input,

particularly comprehensible input, causes language acquisition. Reading provided the students with knowledge or information about the target language, specifically about linguistic, rhetorical and organizational features of writing, which was subsequently used as resources for writing. Second, ARLA helped the students to become aware of language features. In noticing hypothesis, Schmidt (1990) highlights a critical role of noticing in language acquisition. He claims that input that learners do not notice cannot be acquired; instead, only input that learners become aware of can well be stored in their short term memory in the form of intake, which can then be acquired. While mining during ARLA, the students were paying close attention to linguistic, rhetorical features of text, and thus in a position to store them in a short-term memory more effectively. They consequently could write better with the information processed and possibly internalized. Third, in view of output hypothesis (Swain, 1985), while producing language in an essay writing, the students became aware of the gap between what they wanted to express and what they were actually able to express. This process of noticing the gap led them to recognize what they did not know or partially knew, and the students possibly encountered linguistic features from the reading materials that could fill in the noticed gaps with the help of ARLA.

In the meantime, positive impacts of ARLA were further corroborated by the students' perception of ARLA. They responded to ARLA positively. Benefits of ARLA they listed include a better memory of the linguistic features noticed, greater opportunities to use the linguistic features, and a use of a greater variety of expressions.

VI. CONCLUSION

ARLA is an integrated reading and writing task in which language learners read a text while paying close attention to its linguistic, organizational features, shared the noticed features with others, and engage in writing. On the basis of the notion that reading and writing are interrelated skills and integrated literacy tasks will accordingly help to develop writing skills, the current study designed ARLA and implemented it in a Korean college writing class for a semester.

Both comparisons of pre- and post-tests and interviews with the students revealed that ARLA had a positive effect on the enhancement of EFL writing in various dimensions. Findings of this study indicate that integrating reading and writing in L2 class can promote writing development. This result is consistent with the findings of previous studies of the effect of integrated reading-writing tasks, specifically summary writing, on L2 writing development (Kim, 2001; Kim & Moon, 2014; Ko, 2009). Worth noting is that the current

study contributed to expanding the boundary of the research on the reading-writing relationships by employing a new integration task designed based on sound theories.

During ARLA, the students took the role of miners or detectives searching for linguistic, rhetorical clues about writing while reading. They were actively engaged in looking for information on language, particularly components that constitute writing. Reading indeed allowed students a rich exposure to various features of the target language and also to its rhetorical variety as they walk through the text. At the same time, conscious awareness of language features that occurred during individual mining and whole class reporting helped the students to store the features more effectively. Thus language input that the students noticed and gained subsequently served as useful resources for their own writing. These results lend support to a claim that input from one skill, reading in the current study, helps to shape the development of another, writing. The current study adds empirical evidence to the claim that L2 learners can develop literacy skills more effectively when reading and writing are integrated in writing instruction.

Meanwhile, this study has to acknowledge a couple of limitations. One limitation is that it is difficult to generalize its findings due to a small sample size. The current study recommends that future studies be conducted involving sufficient numbers of language learners. Another limitation concerns a lack of a control group. A caution is needed in interpreting the results of the study as regards the impact of ARLA given that the students may have had opportunities for additional English learning in other contexts. In the future, studies should compare an experimental group and a control group for a robust investigation of effects of an integrated literacy task.

Finally, the current study highlights pedagogical implications based on research findings. First of all, it is necessary to teach reading and writing together in L2 writing class. Integration of reading into writing creates opportunities for L2 learners to delve into features of the text and use them for their own writing. Secondly, in order to achieve the potential of integrated literacy tasks for writing development, it is important to design and implement effective reading-writing integration tasks. Simply having students read alone is not enough as claimed earlier (Leki & Carson, 1997; Kim 2011, 2012). Instead, various teaching methods and curricular activities should be designed and used. Instructors need to design integrated reading-writing tasks appropriately in consideration of the characteristics of learners (e.g., age, motivation level, proficiency level), and learning context (e.g., educational goals, class time).

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APPENDIX A

Criteria for Discrete Ratings of Overall Writing Quality

Component Scale	Criteria
Content	
30-27	Excellent to very good: knowledgeable; substantive, thorough development of thesis; relevant to topic assigned.
26-22	Good to average: some knowledge of subject; adequate range; limited thematic development; mostly relevant to topic, but lacks detail.
21-17	Fair to poor: limited knowledge of subject; minimal substance; poor thematic development.
16-13	Very poor: shows little or no knowledge of subject; inadequate quantity; not relevant, or not enough to rate.
Organization	
20-18	Excellent to very good: fluent expression; clear statement of ideas; solid support; clear organization; logical organization; logical and cohesive sequencing.
17-14	Good to average: adequate fluency; main ideas clear but loosely organized; supporting material limited; sequencing logical but incomplete.
13-10	Fair to poor: low fluency; ideas not well connected; logical sequencing and development lacking.
9-7	Very poor: ideas not communicated; organization lacking, or not enough to rate.
Grammar	
20-18	Excellent to very good: accurate use of relatively complex structures; few errors in agreement, number, tense, word order, articles, pronouns, prepositions.
17-14	Good to average: simple constructions used effectively; some problems in use of complex constructions; errors in agreement, number, tense, word order, articles, pronouns, prepositions.

13-10	Fair to poor: significant defects in use of complex constructions; frequent errors in agreement, number, tense, word order, articles, pronouns, prepositions; lack of accuracy interferes with meaning.
9-7	Very poor: no mastery of simple sentence construction; text dominated by errors; does not communicate, or not enough to rate.
Vocabulary	
25-22	Excellent to very good: complex range; accurate word/idiom choice; mastery of word forms; appropriate register.
21-18	Good to average: adequate range; errors of word/idiom choice; inappropriate choice, usage; meaning not effectively communicated.
17-11	Fair to poor: limited range; frequent word/idiom errors; inappropriate choice, usage; meaning not effectively communicated.
10-5	Very poor: translation-based errors; little knowledge of target language of vocabulary, or not enough to rate.
Mechanics	
5	Excellent to very good: mastery of conventions of spelling, punctuation, capitalization, paragraph indentation, etc.
4	Good to average: occasional errors in spelling, punctuation, capitalization, paragraph indentation, etc., which do not interfere with meaning.
3	Fair to poor: frequent spelling, punctuation, capitalization, paragraphing errors; meaning disrupted by formal problems.
2	Very poor: no mastery of conventions due to frequency of mechanical errors, or not enough to rate.
Total	/100

Examples in: English
Applicable Language: English
Applicable Levels: College or University

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