

The Efficacy of Written Corrective Feedback on KFL Learners' Writing

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Abstract

The current study examined the relative effectiveness of dynamic written corrective feedback (DWCF) in KFL (Korean as a Foreign Language) contexts. Also, the relationship between learner variables (motivation and anxiety) and the effectiveness of written corrective feedback (WCF) was examined.

Students ($n=32$) enrolled in intermediate Korean classes were asked to write 9 short texts during classes. Direct feedback (DF) ($n=14$) and DWCF ($n=18$) were provided for two groups respectively. The accuracy, complexity, and fluency in a pre-test written text was compared with those in a post-test at the end of semester. Motivation and anxiety questionnaire were administered to examine whether learner variables mediate the effect of WCF.

A repeated measures ANOVA demonstrates that both groups resulted in significant accuracy improvement in a new piece of writing, but there was no significant difference between the two groups. Though the change in complexity and fluency was not statistically significant, both types of feedback improved complexity. A different impact of WCF on fluency between DF and DWCF was identified. The DWCF group improved in fluency and the DF group declined, although the changes were not statistically significant. Repeated measures ANCOVA result shows no significant correlation between learner variables and the effectiveness of WCF.

Key words: dynamic written corrective feedback (DWCF), direct feedback (DF), written corrective feedback (WCF), learner variables.

1 Introduction

Although a majority of L2 instructors have employed written corrective feedback (WCF) to improve L2 students' proficiency in writing, studies on the effect of WCF on L2 writing had been scarce prior to Truscott's recommendation to abandon WCF (1996). This is because writing received the least attention among four language skills before the mid-1990s, and writing process pedagogy (Emig, 1971, 1983; Zamel, 1983) and Krashen's SLA theories (Krashen, 1981, 1982, 1985) reduced the role of WCF in L2 classrooms (Ferris, 2010). Truscott's (1996) call to abolish WCF due to its claimed detrimental effect on students' writing development triggered a great volume of studies that have provided evidence of the effectiveness of WCF. SLA researchers have investigated the long-term effect of WCF on specific error types (e.g. English definite or indefinite articles, tense, and preposition); L2 writing researchers have examined the overall effectiveness of the learners' L2 text (Ferris, 2010). A substantial volume of studies has reported the positive evidence of the effects of WCF, and recent research has focused on the relative efficacy of different types of feedback: 1) focused and unfocused feedback and 2) direct and indirect feedback.

When it comes to Korean as second or foreign language, only a few studies have examined the effect of WCF (A.S. Byon, 2005; E.J. Kim, 2002) and the relative efficacy of direct feedback (DF) in comparison with two types of feedback: indirect feedback (IF) and conference feedback (Dong & Kim, 2015; J.S. Kim, 2008; J.H. Park, 2007). They reported that DF was more effective than IF in KFL contexts. DF is known to be beneficial for low proficiency-level learners who have insufficient linguistic knowledge to edit their own errors. Ferris (2011), however, argued that IF has advantages in that students' active engagement in error corrections can enhance their L2 writing development in the long term. E.S. Park, S.H.

Song, and Y.K. Shin (2015) reported that all KFL learners in their study regardless of their proficiency levels could self-correct 37% of their own errors, which suggests that indirect feedback is also beneficial for low proficient learners. DF is the dominant WCF in KFL classroom, but exclusive provision of DF even for the low proficient learners can deprive them of an opportunity to correct their treatable errors, which hinders the learners' autonomy in learning in the long term.

Dynamic written corrective feedback (DWCF) is an alternative type of WCF that provides indirect feedback for *treatable errors*¹ and direct feedback for *untreatable errors*. Students are expected to correct their errors based on the teachers' feedback until the learners' texts are error-free. Recent studies (Evans, Hartshorn, McCollum, & Wolfersberger 2010; Hartshorn & Evans, 2015; Kurzer, 2017) reported that DWCF is effective, and suggested DWCF as an alternative pedagogical method to supplement traditional grammar instruction. DWCF studies have been restricted to ESL/EFL contexts, however, and no research has yet explored its efficacy in other foreign language classrooms. Hence, the current study attempts to explore the relative effectiveness of DWCF in KFL context where IF is prevalent.

2 Key Issues in the Written Corrective Feedback

2.1 Is Written Corrective Feedback Effective?

Truscott's (1996) assertion that CF is potentially harmful triggered a heated debate on its efficacy among L2 writing specialists. He argued that teachers' error corrections divert students' attention to their own errors, which results in their avoidance of more complex sentence structures in their future writing. Since CF deprives both teachers and students of their valuable time and energy, he suggested spending time on other productive class activities such as metalinguistic grammar explanation or more writing practices (Truscott, 1996, 2004, 2007). Ferris (1999) rebutted Truscott's claim (1996), arguing that most L2 writing students' strong desires to receive WCF from teachers should be reflected in L2 writing instruction. Many L2 writing scholars agreed with Ferris' argument, claiming that WCF is helpful in improving accuracy in L2 writing (Bitchener, 2008; Bruton, 2010; Chandler, 2003; Ellis, Sheen, Murakami, & Takashima, 2008; Sheen, 2007).

It was, however, generally accepted that the existing research was not sufficient to conclude that WCF is effective. One of the reasons that the effects of WCF were controversial lay in the methodological inconsistencies of the previous studies, which made it difficult to compare the effect of WCF across studies (Ferris, 2004). According to Liu and Brown's (2015) meta-analysis on the issues of WCF research designs, five different types of WCF studies have been reported. The most frequent type of study compared one or multiple treatment groups with a control group (45%). The second most common type examined the effect of form-focused CF in the absence of a control group (32%). This is due to an ethical dilemma that L2 writing practitioners feel they should somehow be helping L2 learners, but this research design without a control group could not avoid criticism that such a study could not properly address the research question, the effect of CF. In short, some studies did not include a control group, and other studies which included a control group compared different types of corrective feedback. Thus, the results of some existing WCF studies were not directly comparable to the results of other studies due to different research designs.

The second reason for an inconclusive effectiveness of WCF can be attributable to

¹ Ferris (1999, 2006) categorized errors into two types: treatable and untreatable errors. Treatable errors (e.g. verb tense and noun endings) refer to the errors that are more amenable to WCF, whereas untreatable errors (e.g. wrong word and sentence structure) are the errors that learners can hardly self-correct even with teachers' WCF.

methodological limitations of WCF research design. Earlier studies (Ashwell, 2000; Fathman & Whally, 1990; Ferris, 1997) reported that WCF was effective, but they measured accuracy on tests or revision of the same texts, not a new piece of writing. Therefore, Truscott (1996) devalued the effect of WCF, referring to it as “pseudo-learning” (p. 345). He argued that the meta-linguistic knowledge acquired from teachers' WCF is restricted to students' explicit knowledge required for revision, which is unlikely to develop their implicit knowledge which can be transferred to their new texts after a longer period of time. In Liu and Brown's (2015) samples of their meta-analysis, 7% of WCF studies did not require students' revision after receiving WCF; 16% of them had students only look at CF; 23% of them did not even specify the inclusion of revision. Hence, the necessity of longitudinal studies arises to determine the effect of WCF by measuring the accuracy of a newly written text. In response to Truscott's assertion, a growing body of longitudinal research has reported that WCF was effective in reducing the error rate on L2 writing learners' new texts over time (Bitchener, 2008; Bitchener & Knoch, 2008a, 2008b, 2009; Sheen, 2007; Kurzer, 2017). Hence, a fair amount of the studies have now provided evidence that WCF is beneficial in improving the accuracy of L2 learners' texts.

2.2 Which Corrective Feedback is More Effective?

In recent years, WCF studies have compared different types of feedback (eg., focused vs. unfocused, direct vs. indirect) to examine whether certain types of feedback are more effective than other types in improving accuracy of the learners' new texts.

2.2.1 Focused versus Comprehensive Corrective Feedback

Focused corrective feedback places an emphasis on certain linguistic error types, whereas unfocused (comprehensive) corrective feedback examines all error types in students' texts. As noted above, Ferris (2011) divided WCF studies into two: SLA researchers' experimental studies and L2 writing researchers' classroom research. SLA researchers were interested in the learners' long-term acquisition of specific linguistic features such as English articles or hypothetical conditional (Bitchener, 2008; Bitchener & Knoch, 2008a, 2008b; Ellis et al., 2008; Sheen, 2007; Shintani, Ellis, & Suzuki, 2014). These studies were carefully designed, addressing the methodological flaws of the previous WCF research, and reported that WCF was effective in improving the accuracy of certain grammatical features in L2 learners' written text. Truscott (1996) contended that acquisition of a single linguistic form does not necessarily mean extension or transfer of their linguistic knowledge to syntax, morphology, or other parts of a language system. Also, L2 writing researchers expressed their concerns about the ecological validity of focused feedback (Ferris, 2010). They argued that focused feedback is not authentic in the actual classroom contexts because L2 learners make a wide range of errors. Ferris (2010) also raised a question as to whether the effect on narrowly-focused error categories can be generalized to the development of students' overall writing proficiency.

Hence, L2 writing researchers examined the effect of comprehensive feedback on students' overall writing proficiency. Van Beuningen, De Jong, and Kuiken (2012) provided the evidence that comprehensive feedback contributed to L2 learners' grammatical accuracy gains in not only revisions but also newly written texts. Ellis et al. (2008) found that both focused and comprehensive feedback had a positive effect on grammatical accuracy gains. On the other hand, Sheen, Wright, and Moldawa (2009) reported that focused feedback was more effective than comprehensive feedback. Sheen and colleagues, however, indicated that the corrections in the comprehensive feedback group were not as systematic as those of the focused feedback group; some errors were corrected while others were not. Van Beuningen et al. (2012) argued that these mixed results should be interpreted with caution, since unsystematic

corrections can influence the effect of comprehensive feedback. More studies on comprehensive feedback are required to draw a robust conclusion.

2.2.2 Direct Versus Indirect Corrective Feedback

Direct feedback (DF) refers to explicit error correction by providing the correct forms for the errors the students made. Meanwhile, indirect feedback (IF) provides only cues for the learners' errors by underlining, coding, and circling and so on, encouraging them to correct their own errors. Some scholars claimed that IF enables L2 learners to engage in resolving their own linguistic errors. This self-editing ability will promote their long-term acquisition and their responsibility for their own progress (Bitchener & Knoch, 2008; Ferris, 2006). Meanwhile, Chandler (2003) stated that DF is more effective for ESL/EFL students who are not equipped with sufficient linguistic knowledge to correct their own errors, as it helps them internalize complex linguistic forms by reducing their cognitive processing time to hypothesize corrections. As for students' preferences, mixed results were reported; Ferris and Roberts (2001) reported that L2 learners favored IF, but Chandler (2003) found that ESL students preferred DF.

Research on the relative efficacy of DF and IF on the improvement of accuracy reported inconsistent results. Some studies found that IF was more beneficial than DF (Ferris, 2006; Lalande, 1892), while others found that DF was more effective (Bitchener & Knoch, 2010; Chandler, 2003; Van Beuningen et al., 2012). Other studies also reported no advantage for IF over DF (Rob, Ross, & Shortreed, 1986; Semke, 1984). As only a few studies addressed the relative effectiveness of DF and IF, more empirical evidence is needed to make a pedagogical decision on which method of error correction teachers should provide.

2.2.3 Dynamic Written Corrective Feedback

Based on observations from pedagogical practices and research literature on L2 writing, Hartshorn et al. (2010) suggested an alternative instructional methodology, dynamic written corrective feedback (DWCF), which treats L2 learners' errors with an aim to help them improve accuracy. DWCF is built on theoretical backgrounds borrowed from skill acquisition theory, zone of proximal development (ZPD), input hypothesis, and interaction theory. Hartshorn and Evans (2015) noted that DWCF was designed in accordance with skill acquisition theory, which claims that abundant practice and feedback can lead to automatization (DeKeyser, 2001, 2007). According to Anderson's ACT (adaptive control of thought) model, declarative knowledge does not transfer to procedural knowledge. That is, simple knowledge about language (declarative knowledge) does not necessarily proceed to the actual and adequate use of language in authentic contexts (procedural knowledge). Sufficient instruction, extensive practice, and appropriate feedback, therefore, are necessary for L2 learners to automatize their cognitive processing about the target linguistic forms and finally transfer to their procedural knowledge. In L2 writing, students can reduce their error rates when they are equipped with procedural knowledge.

DWCF underscores two aspects: (1) accommodating L2 learners' urgent needs based on their written texts and (2) providing "meaningful, timely, constant, and manageable writing task and feedback" (Evans et al., 2010, p.87). The process of DWCF is as follows. During class, students write a paragraph with a given topic for 10 minutes, and the teacher collects their paragraphs. In the first round of WCF, IF is given using correction symbols such as marking, circling, or underlining treatable errors (e.g. some systematic grammatical rules) that are expected to be corrected by students, while DF (correct forms) with correction symbols is given to untreatable errors (e.g. some complicated linguistic features such as preposition or unidiomatic sentence structure) that are unlikely to be edited even after receiving feedback (Ferris, 1999). Students are expected to tally their error types, correct their errors, and resubmit

the paragraph. In the second and third rounds, the teacher indicates the remaining errors on the revised text using the same set of correction symbols, and students edit their texts based on the feedback until their paragraphs are error free (Evans et al., 2010).

Though DWCF studies reported that many students favored DWCF (Akiyama & Fleshler, 2013; Lee, 2009), more research is needed to verify the efficacy of DWCF on accuracy development in students' newly written texts. Lee (2009) found no significant difference between treatment (DWCF) and control group (traditional grammar class) in an intensive English program (IEP) context, but some pioneer studies found statistically significant effects of DWCF on the development of linguistic accuracy (Evans et al., 2010; Evans, Hartshorn, & Strong-Krause, 2011; Hartshorn et al., 2010; Hartshorn & Evans, 2012, 2015). These studies, however, reported no significant effects on the development of complexity and fluency (Evans et al., 2011). Truscott (2004, 2007) argued that WCF might have students become wary of the teacher's corrections, which results in harmful effects on complexity of the text by avoiding some grammatical forms for which they feel less confident.

With regard to the effect of DWCF on specific linguistic forms, Hartshorn and Evans (2012) reported no significant impacts on the use of count and non-count nouns, singular and plural, subject-verb agreement, and verb tense, but found significant improvements in the use of determiners and semantic and lexical accuracy. Kurzer (2017) examined the effect of DWCF on three L2 learner error types (global, local, and mechanical errors) and reported that DWCF was effective for all three types. Evans et al. (2010) also found significant improvement on common errors in learners' new writing texts. However, the reasons why DWCF is efficient for some grammatical features but not for other features have not yet been researched.

2.3 Learner Variables that Mediate the Effect of WCF

Evans et al. (2010) claimed that there are three contextual variables that impact the efficacy of WCF: learner variables, situational variables, and methodological variables. *Learner variables* can be everything related with students' learning experience (e.g. motivation, learning style, attitude, socioeconomic background, goals, and L1); *methodological variables* refer to instructional methodologies (e.g. instructional design, what is taught, and how it is taught); and *situational variables* are the learning environment (e.g. teacher, physical environment, and socioeconomic conditions). Ferris and Hedgcock (1998) stated that "there is tremendous variability in students' ability to benefit from grammar instruction and feedback" (p. 201). Individual differences divided into cognition, emotion, and motivation are interrelated with each other and the environment influence L2 learning to some or great extent (Dörnyei, 2010). The previous error correction studies have not addressed this issue as to how these individual variations factor into the effectiveness of WCF.

Only a few pioneer studies have attempted to identify how individual learner differences impact the efficacy of WCF. Within a sociocultural framework, it is important to understand learners as active agents who assign relevance and significance to take actions. Thus, the efficacy of WCF highly depends on the learners, as they are the ones who control their actions of noticing the errors and responding to the teacher's feedback when receiving WCF (Bitchener & Storch, 2016). Sheen (2007, 2011) investigated how learners' language aptitude and attitude mediated the effect of WCF, and found the statistically significant relationship between them. Kormos and Trebits (2012) also reported correlation between language aptitude and learners' written performance in a cartoon description task, but no relationship was found in a narrative task.

Korean is classified as one of the most difficult foreign language for English speakers to learn.² Instruction in KFL context is highly devoted to grammatical explanations, and

² Korean is classified in a group four languages (Chinese, Japanese, and Korean) that require the most studying

learners of Korean rarely have an opportunity to use Korean outside class. Heritage learners, *ear learners* who learned Korean in a natural setting (Reid, 1998), especially tend to depend on their spoken language to a great extent, which often prevents them from proceeding to an advanced level of proficiency. Hence, writing instruction to assist balanced language skill is needed, but the effect of writing instruction and WCF is questionable for those learners who are not highly motivated to improve their writing skills. Gu nette (2007) argues: “If the students are not committed to improving their writing skills, they will not improve, no matter what type of corrective feedback is provided” (p. 52). It is expected that KFL learners’ achievement in writing highly depends on their individual differences such as their goals, motivation, aptitude and attitudes toward the target language. Most scholars agree that L2 learners’ motivation and anxiety affect their second or foreign language acquisition to some or a great extent.

3 Research Questions

3.1 Written Corrective Feedback in KFL Context

When it comes to Korean, there have not been many WCF studies in KSL or KFL contexts, which reflects the paucity of writing instruction in KFL classroom. Especially for heritage learners, maintaining their ethnic and cultural identity through communication with their parents and relatives takes precedence over other needs, and therefore listening and speaking are considered the most important skills (Kim, E.J, 2006). Hence, Korean instruction prioritizes improving listening and speaking, while writing intervention in KFL context is relatively minimized. KFL learners are expected to submit their Korean composition assignments without sufficient writing instruction, and WCF (mostly DF) is provided for their written assignments just a few times during one semester. Hence, writing in KFL context is often considered an exercise to improve grammatical and lexical proficiency.

Some studies (Chung, 2015; Sim, 2016) in KFL contexts examined the learners’ perception or preferences of teachers’ feedback according to the learners’ cultural backgrounds (Cho, 2013) or proficiency levels (Damron & Kim, 2009). Others examined the effects of different types of oral corrective feedback in the KFL classroom interaction (Choi & Kim, 2011; Jin, 2005; Jung 2010; Lim, 2008; Kim, 2016). With regard to WCF in KFL classroom, E.J. Kim (2002) reported a long-term effect of WCF, and Park (2007), J.S. Kim (2008), and Dong and Kim (2015) compared the effects of the different types of feedback: direct and indirect WCF and writing conferences.

E.J. Kim’s (2002) case study examined the longitudinal effect of indirect WCF taking five Korean heritage learners as research participants. She reported that only the errors related to discourse and pragmatics (speech levels and honorific expressions) were significantly reduced, but the rate of lexical and grammatical errors was not affected. A.S. Byon’s (2005) study reported that peer-editing feedback was beneficial in raising awareness of advanced Korean heritage learners in terms of content organization and development of topic. Two studies (J.S. Kim, 2008; J.H. Park, 2007) compared the effects of DF and IF; both short-term and long-term effects indicated that DF was more effective in reducing the error rates than IF. In a more recent study, Dong and Kim (2015) compared the effects of three different types of feedback (DF, IF, and conference feedback) with a control group. This 10-week study revealed that all three treatment groups outperformed a control group, and conference feedback was most effective in improving accuracy in writing in Korean.

3.2 Research Questions

Some studies (J.S. Kim, 2008; J.H. Park, 2007), however, examined the error rates based on the revisions, not on newly written texts. In addition, DWCF, an alternative type of WCF, has never been implemented in KFL context where DF is dominant. Though DF can be effective for low proficient L2 learners who have difficulty in self-editing their errors, provision of the grammatically accurate form does not always lead to learning (Lee, 2011). L2 learners tend to regard teachers' error correction as less important when revision is not required. Moreover, DF does not allow L2 learners to edit the treatable errors that are relatively easy for them to correct (Ferris, 1999, 2011), which hinders developing the learners' autonomy in learning.

Hence, the current study will examine the long-term (16 weeks) effect of WCF on the development of accuracy on a new piece of writing, and the relative efficacy of DWCF in comparison with DF in KFL context (RQ1). Although accuracy improvement is the major interest in WCF studies, it would be worthwhile to see whether WCF affects other constructs of language development: complexity and fluency. Thus, the present study also reports complexity to examine whether accuracy development leads to learners' simpler texts. Fluency will be also reported to examine whether the improvement of accuracy has a negative effect on fluency. Research questions as to how individual variables affect the efficacy of WCF in KFL context will be also addressed by investigating the relationship between learner variables (motivation and anxiety) and the development of their accuracy in writing (RQ2).

- (1) RQ 1. How effective is DWCF relative to DF on KFL learners' overall accuracy, complexity, and fluency in a new piece of writing?
- (2) RQ 2. How do the learner variables (motivation and anxiety) mediate the effect of WCF?

4 Methodology

4.1 Context and Participants

The present study examined the effectiveness of WCF of KFL learners who enrolled in the intermediate Korean courses at the University of Hawai'i at Mānoa. Students are placed in different levels of programs based on the results of Korean placement test, which measures vocabulary, reading comprehension and writing skills. This study is a quasi-experimental classroom study in which students enrolled in two intact intermediate sections of undergraduate courses (KOR 202) participated. The curriculum of Korean language courses is designed to improve overall proficiency, and therefore, writing skill development is less prioritized than writing intensive programs as in most previous WCF studies. Hence, writing is often utilized for the purpose of grammatical exercise, and WCF is often provided for language forms rather than content, organization, rhetorical device, or other factors.

This study included 32 heritage and non-heritage learners of Korean from various majors. Their age ranged from 19 to 76 (The Senior Citizen Visitor Program allowed one senior student to take this course). Table 1 below shows the number of participants assigned in treatment and control group respectively.

Table 1: Study Participants (N=32)

	DWCF	DF
No. of sections	1	1
No. of students	18	14

4.2 Feedback

For each writing task, students in both treatment and control groups were asked to write a new piece of writing for 10 minutes in response to different writing prompts during class time. Considering the students' urgent needs for speaking proficiency development and their expected difficulty to create accurate sentences in Korean, short and casual text topics were selected so that they might be able to speak about their personal interests outside class. In order to control for writing prompts variable, topics were kept the same between the two groups as seen in Table 2 below. Students in both groups (DWCF and DF group) were taught with the same teaching materials by the same teacher researcher in an identical way to control for intervening variables. The only difference between the two treatment groups is feedback type and requirement of revisions.

Table 1: Writing Prompts

	Intermediate (DWCF)	Intermediate (DF)
Pre-test	My Day	My Day
1st	My favorite food	My favorite food
2nd	My favorite TV show	My favorite TV show
3rd	My travel	My travel
4 th	Korea vs. America	Korea vs. America
5th	Introduce your future husband/wife	Introduce your future husband/wife
6th	Write a letter to anyone you like	Write a letter to anyone you like
7th	Introduce your friend	Introduce your friend
8th	My hobby	My hobby
9th	My plan during summer holidays	My plan during summer holidays
Post-test	My weekend	My weekend

In the DWCF group, students were expected to correct their own errors after receiving feedback (IF and DF), and to continue rewriting until their texts were error-free. IF was provided for the treatable errors or relatively easy grammatical items such as object particle (*ul/lul*) and location/time particle (*ey/esye*), while DF was provided for untreatable errors or challenging grammatical items such as noun-modifying form, delimiter (*un/nun*), and case particle (*i/ka*). The feedback was given at most three times on their same writing drafts adapting the DWCF process (See Evans et al., 2010), but the error-correction method was slightly adjusted with the participants' proficiency levels in mind.

The process of DWCF I provided is as follows. In the first round of feedback, I gave IF using codes (See Appendix A) with hints or clues to encourage students to correct their errors on their own. Precise forms were provided immediately for some of their errors that were beyond their proficiency levels (DF). For example, application of some Korean particles (e.g., *-un*, *-nun*: topic markers, *-i*, *-ka*: subject particles) at the discourse level is challenging even for advanced-level learners, which violates the principle of manageability³ (Evans et al., 2010). Therefore, correct forms were provided for these untreatable errors⁴ in the first round of

³ Hartshorn et al. (2010) introduced manageability as one of the characteristics of DWCF: "Tasks and feedback are manageable, meaningful, timely, and constant for both the learner and teacher" (p. 452). Manageability means that manageable tasks and feedback should allow students to process and learn from teachers' feedback.

⁴ The decision to divide treatable and untreatable errors was not made based on research results because there are few studies on this issue in Korean. I referred to Ferris's (1999, 2006) categorization of treatable and untreatable errors. For example, treatable errors that I categorized are relatively easy grammar rules that occur in a rule-governed way (e.g. The sentence ender *이/에요* is used after consonants, while *예요* is used after vowels.)

feedback. Students were expected to self-edit and turn in their revisions. In the second round, correct forms were given to most of their errors except basic linguistic grammatical items so as to provide the opportunity for learners to correct their own errors. I provided additional cues such as metalinguistic explanation and textbook page to refer to rather than simply giving grammar codes as DWCF suggests. Participants rewrote and resubmitted their drafts in response to the second feedback. Finally, I checked their final drafts and gave additional corrections if necessary. Table 3 shows error correction examples for DWCF group, and Table 4 presents the timeline of the feedback procedure.

Table 2: Error Correction Example (DWCF Group)

Step	Feedback types	Example ⁵		
1 st feedback	Provide DF and IF • DF (difficult grammatical items, eg., noun-modifying form, <i>un/nun, i/ga</i>) • IF (underline & clues on easy grammatical items, eg., object particle)	내가 nay-ka I-NOM 음식 <u>을</u> umsik- <u>ul</u> food-ACC 순두부 <u>이에요.</u> VF* swuntwupwu-i-eyyo swuntwupwu-COP-POL <i>My favorite food is 순두부.</i>	제일 ceyil most	좋아하는 cohaha-nun like-RL
2 nd feedback	Provide DF and IF • DF (difficult grammatical items, eg., noun-modifying form, <i>un/nun, i/ga</i>) • IF (underline & detailed hints or clues by providing grammatical explanation or a reference (e.g. textbook page number))	내가 nay-ka I-NOM 음식 <u>은</u> umsik- <u>un</u> food-TOP 순두부 <u>이에요.</u> VF (consonant+이에요/ vowel+에요) swuntwupwu-i-eyyo swuntwupwu-COP-POL	제일 ceyil most	좋아하는 cohaha-nun like-RL
3 rd feedback	• Provide DF if necessary.	내가 제일 좋아하는 음식은 순두부예요. 내가 nay-ka I-NOM 음식 <u>은</u> umsik- <u>un</u> food-TOP	제일 ceyil most	좋아하는 cohaha-nun like-RL 순두부 <u>예요.</u> swuntwupwu-yey-yo swuntwupwu-COP-POL

*V.F. (Verb Form)

⁵ ACC = Accusative particle; CONN = Connective; COP = Copular; GEN = Genitive suffix; LOC = Locative; NOM = Nominative particle; NOML = Nominalizer; POL= Polite ending; RL= Relative; TOP = Topic particle.

Table 4: Writing Prompts and Weekly Feedback Timeline (DWCF Group)

	Monday	Tuesday	Wednesday	Thursday
Writing prompt 1	Writing based on prompt 1	Receiving draft 1 with the teacher's feedback	Editing and submitting draft 2	Receiving draft 2 with the teacher's feedback
Writing prompt 2	Editing and submitting draft 3 Writing based on prompt 2	Receiving draft 1 with the teacher's feedback	Editing and submitting draft 2	Receiving draft 2 with the teacher's feedback

Students who were assigned to the DF group received feedback only once and were not required to revise the text. The excerpt below is an example of error corrections for the DF group. I underlined grammatical errors and provided the correct linguistic forms for every error they made.

(13) Error Correction Example (DF Group)

- a. 저는 두 면명의 친한 친구를가 있어요.
 ce-nun twu myen-myeng-uy chinha-n chinkwu-lul ka iss-eyo.
 I-TOP two side counter-GEN close-RL friend-ACC NOM exist-POL
 'I have two close friends.'

- b. 저는제가 제일 좋아하는 것을 음식은을 먹기도
~~ce-nun~~ ceyka ceyil cohaha-nun ~~kes-ul~~ umsik-~~un~~ ul mek-ki-to
 I-TOP I-NOM most like-TOP ~~thing-ACC~~ food-~~TOP~~ ACC eat-NOML-also
 하고 노래방에서 노래 하기도 해요.
 ha-ko nolay-pang-eyse nolay ha-ki-to hay-yo.
 do-CONN song-room-LOC song do-NOML-also do-POL
 'What I like most is to eat food or to sing a song in the singing room.'

4.3 Procedures

As seen in Table 5 below, students filled out the background questionnaire (Appendix B) on the first day of class. For the pre-test, students were asked to write a short text according to a writing prompt (*My Day*) for 15 minutes. For the post-test, they wrote another essay based on a similar topic (*My Weekend*) for 15 minutes in the 16th week. In order to examine the relationship between individual variables and the efficacy of WCF, motivation questionnaire (Dörnyei & Taguchi, 2009; Kim E.J, 2006; Schmitt et al 2004), and anxiety questionnaire (Cheng, 2004) (Appendix C) were administrated at the end of the semester.

Table 3: Timeline for Administrating Instruments

Semester (16 weeks)	Instrument
1 st week	Background Questionnaire
3 rd week	Pre-test (My Day)
15 th week	Motivation & anxiety questionnaire
16 th week	Post-test (My Weekend)

Students wrote a total of 11 short texts throughout one semester. All the students' written texts were collected, except data from those who were absent from classes.

4.4 Data Collection and Analysis

4.4.1 RQ1. The Efficacy of DWCF and DF on KFL Learner's Writing

All the participants' hand-written texts during classes were collected; their pretest and posttest writings were analyzed to address the first research question. For accuracy measurement, I coded all the errors according to the error types using a photocopy of the handwritten paragraphs and tallied the total number of the errors manually. In order to measure fluency, I typed their texts, correcting their word spacing errors, and obtained the total number of words using a word processor. Finally, I put each sentence of students' texts in an Excel spreadsheet and manually analyzed the T-units of each sentence.

4.4.1.1 Accuracy Measurement

Overall accuracy was measured by calculating error rate (total number of grammatical errors/total number of *ecel*) on the pre-test and post-test, as previous CF studies (Chandler, 2003; Truscott & Hsu, 2008; Van Beuningen et al., 2012) employed. Other candidate measures such as error free T-unit (Wolfe-Quintero, Inagaki, & Kim, 1998) and error-free clause (Wigglesworth, 2008) ratios may not be valid because "the number and type of error [are] not identified" (Polio & Shea, 2014, p. 22). Moreover, these measures may "conflate accuracy and fluency, or at least present only one possible aspect of accuracy (Larsen-Freeman, 2009, as cited in Kurzer, 2017, p. 10). In this study, all the errors in the students' written texts were counted except mechanical errors (spelling, punctuation), and the same errors⁶ were counted as one.

4.4.1.2 Fluency Measurement

Fluency was calculated by the total number of *ecel* (equivalent to words in English). For the current study, all the participants were asked to write for 15 minutes during class according to different writing prompts for the pretest (My Day) and posttest (My Weekend) respectively. Wolfe-Quintero, Inagaki, and Kim (1998) defined fluency as "rapid production of language" (p. 117), and said that fluency can be measured by counting "the number, length, or rate of production units (t-units, clauses, and phrases). If writing is done under timed conditions, the sheer number of words written becomes as a rate measure" (p. 14). As most previous studies measured fluency as the number of words, this study also counted the total number of *ecel* for measuring fluency, since the amount time to write short texts was given equally to all the participants.

4.4.1.3 Complexity Measurement

The mean length of T-unit (MLTU), calculated as the total number of words divided by the total number of T-units, was used in this study. Measuring clausal complexity (e.g. MLTU, mean length of clause (MLC)) captures distinctive feature of conversation, whereas phrasal complexity (e.g. number of dependents per nominal, prepositions per nominal) is reported to be an effective complexity discriminator for academic writing (Biber, Gray & Poonpon, 2011; Kyle & Crossley, 2018). Though recent studies (Kyle & Crossley, 2018; Norris & Ortega, 2009) have questioned the interpretative usefulness of MLTU, previous studies reported that higher rated essays are likely to include longer T-units with more clauses (Cumming et al., 2005). In the absence of an automatic complexity analyzer, MLTU seems still useful to measure the learners' writing proficiency and general linguistic development. Moreover, KFL learners'

⁶ e.g., The same and repetitive error was just counted as one.

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written texts in the current study are far from academic writing.

4.4.1.4 Statistical Analysis

An independent sample t-test was administered to examine if there was a significant difference on the pre-test scores in accuracy, complexity, and fluency between the two groups. In order to examine if there is a statistically significant difference in the efficacy of WCF between groups over time, a two-way repeated measures ANOVA was performed with the scores (accuracy, fluency, and complexity respectively) as dependent variable and with time (pretest and posttest) and feedback types as independent variables (IF and DWCF).

4.4.2 RQ2. The Relationship Between Learner Variables and the Effect of WCF

In order to address the research question 2, two questionnaires (motivation and anxiety) were administered.

4.4.2.1 Motivation and Attitude Questionnaire

The motivation questionnaire (Appendix C) consists of 5 subscales: instrumentality, integration (for heritage learners), integrativeness (interest in community and culture), attitude toward L2 learning, and linguistic self-confidence. According to the principles of questionnaire theory (Dörnyei & Taguchi, 2009), each subscale is suggested to include four or five items. The closed-response question items, adapted from Dörnyei and Taguchi (2009), E.J. Kim (2006), and Schmitt et al. (2004), used a six-point likert-scale (1: strongly disagree, 2: disagree, 3: slightly disagree, 4: slightly agree, 5: agree, 6: strongly agree). Five questions (5, 9, 12, 18, 20) were reversed items to prevent the respondents from marking only one direction (either positive or negative) of rating scale.

Cronbach alpha was used to measure internal consistency of each section of the questionnaire. One subsection, linguistic self-confidence ($\alpha=.41$), and two negatively worded items in integration and instrumentality section (Q5, 12) were eliminated to increase reliability as shown in the table 6 below. The reliability of each subsection in the motivation questionnaire ranged from $\alpha= .61$ to $.84$.

Table 4: Motivation Subsection Reliabilities

Variable	K	Question Items	Students (N=32)
Instrumentality	4	9 (R), 10, 11, 12(R) , 15	.69
integration (for heritage learners)	4	5(R) , 6, 7, 8, 14	.84
Integrativeness (community, interest in culture)	5	1, 2, 3, 4, 13	.61
Attitude toward L2 learning	4	16, 17, 18(R), 22	.75
Linguistic self-confidence	4	19, 20(R) , 21, 23	-.41

4.4.2.2 Anxiety Questionnaire

For the anxiety questionnaire (Appendix C), the Second Language Writing Anxiety Inventory (SLWAI) was employed (Cheng, 2004). SLWAI was developed to measure L2 writing anxiety, consisting of three subsections: somatic anxiety (7 items), avoidance behavior anxiety (7 items), and cognitive anxiety (8 items). The current study used all the original question items except on the somatic anxiety subscale, where only three items (Q7, 13, 15) were used, because four items (Q2, 9, 18, 23) appeared irrelevant to KFL classroom contexts. Question 3 in the somatic anxiety section, which was revised, was eliminated to increase reliability. Hence, the reliability

of each subsection in the anxiety questionnaire ranged from $\alpha = .75$ to $.88$ for the students surveyed.

Table 5: Anxiety Subsection Reliabilities

Variable	K	Question Items	Students (N=32)
Somatic anxiety	3	1, 2, 3, 15	.75
Avoidance behavior Anxiety	7	4(R), 5, 6, 7, 8(R), 16, 17(R)	.85
Cognitive Anxiety	8	9(R), 10, 11(R), 12, 13, 14(R), 18, 19(R)	.88

For statistical analysis, repeated measures ANCOVA with motivation and anxiety as covariates and a Pearson correlation were used to examine the mediating effect of learner variables on the effectiveness of WCF.

5 Results

5.1 The Efficacy of DWCF and DF on KFL Learner's Writing

5.1.1 Effect on Accuracy

Table 8 below shows the descriptive statistics of accuracy for DF and DWCF group at both pretest and posttest. An independent sample t-test was conducted to examine whether the accuracy of the students' writing in both treatment groups was similar at the time of the pretest. The result showed that there was no statistically significant difference in accuracy between DF ($M = .23, SD = .13$), and DWCF group ($M = .18, SD = .09$); $t(30) = -1.30, p = 0.203$.

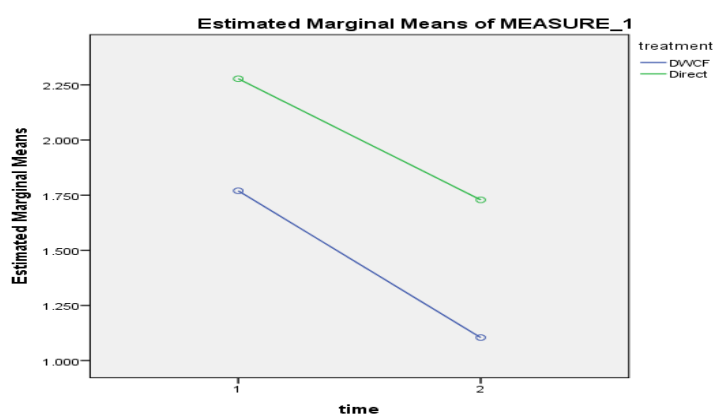
Table 8: Descriptive Statistics (Accuracy)

Group		Pretest	Posttest	Means
DF (n=14)	Mean	0.23	0.17	0.20
	SD	0.13	0.10	0.11
DWCF (n=18)	Mean	0.18	0.11	0.14
	SD	0.09	0.06	0.08
Total (N=32)	Mean	0.20	0.14	0.17
	SD	0.11	0.08	0.10

In order to address research question 1, the relative effect of DWCF compared with DF, a two-way repeated measures ANOVA was performed with error rate (accuracy) as a dependent variable with time (two levels, i.e., pretest and posttest), and WCF type as independent variables. According to Box's Test of Equality of Covariance result, we can accept the null hypothesis that the variances between two groups are homogenous, as evidenced by $F(3, 125015) = 1.04, p = .37$. Leven's Test result also shows that the variances of pre $F(1, 30) = 3.06, p = .09$ and post $F(1, 30) = 2.83, p = .10$ are homogenous respectively. As shown in table 9 below, the interaction between time and treatment was not significant using a critical alpha of $.05$ ($F(1, 30) = .221, p = .642$), which indicates that DWCF and DF group did not behave differently over time. The effect of WCF type was not statistically significant ($F(1, 30) = 3.176, p = .085$), but the effect of the within variable (time) was significant $F(1, 30) = 24.086, p = .000$ with medium effect size (.445). This indicates that the students in both groups significantly improved in accuracy on a new piece of writing in the posttest compared with the pretest, but the difference between two groups in reducing the error rates was not statistically significant.

Table 9: Repeated Measures ANOVA (Accuracy)

Source		SS	df	MS	F	P	η^2
Between							
	Treatment	.051	1	.051	3.176	.085	.096
	Error	.477	30	.016			
Continued Table 12							
Within							
	Time	.058	1	.058	24.086**	.000	.445
	Time×Treatment	.001	1	.001	.221	.642	.014
	Error	.072	30	.002			

**Figure 1: Accuracy Development**

5.1.2 Effect on Complexity

Table 10 below shows the descriptive statistics of complexity for DF and DWCF group at both pretest and posttest. An independent sample t-test result showed that there was no statistically significant difference in complexity between DF ($M=4.94$, $SD=.94$), and DWCF group ($M=5.33$, $SD=1.34$); ($t(30)=0.93$, $p=0.07$).

Table 10: Descriptive Statistics (Complexity)

Group		Pretest	Posttest	Means
DF ($n=14$)	Mean	4.94	5.35	5.15
	SD	0.94	1.2	1.07
DWCF ($n=18$)	Mean	5.33	5.75	5.54
	SD	1.34	1.1	1.22
Total ($N=32$)	Mean	5.16	5.57	5.37
	SD	1.17	1.14	1.16

The condition of homogeneity of variances was met. As shown in table 11 below, two-way repeated measures ANOVA results shows that the interaction between time and treatment was not significant ($F(1, 30) = 0$, $p = .984$). Also, the effect of WCF type ($F(1, 30) = 1.451$, $p = .238$), and the effect of the within variable (time) ($F(1, 30) = 2.734$, $p = .109$) were not statistically significant, either. Though the complexity improvement was not statistically significant, both DWCF and DF had a positive influence on learners' complexity development over time as shown in figure 2. This result indicates that WCF did not result in learners' simplified writing, as Truscott (1996, 2004, 2007) hypothesized.

Table 11: Repeated Measures ANOVA (Complexity)

Source	SS	df	MS	F	P	η^2
Between						
Treatment	2.446	1	2.446	1.451	.238	.046
Error	50.559	30	1.685			
Within						
Time	2.729	1	2.729	2.734	.109	.084
Time×Treatment	0	1	0	0	.984	.000
Error	29.943	30	.998			
Total						

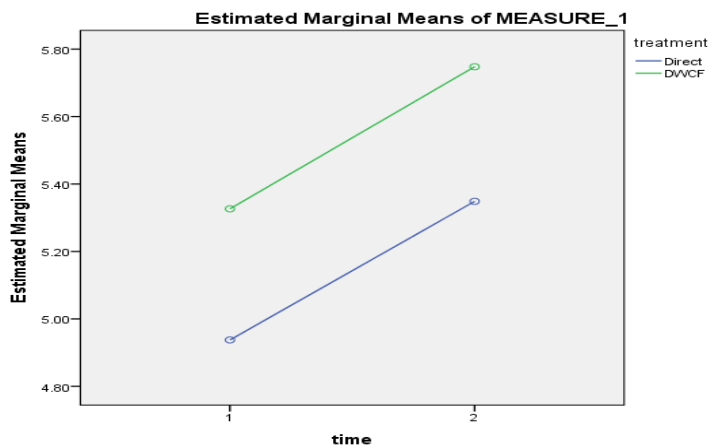


Figure 2: Complexity Development

5.1.3 Effect on Fluency

The average length of students' texts was as follows: pre-test: 44.3 *ecel*, post-test: 45.6 *ecel*. The pretest result from an independent sample *t*-test suggests that DF ($M=39.50$, $SD=14.08$) and DWCF group ($M=49.11$, $SD=16.89$) are not significantly different $t(30)=1.71$, $p=0.097$. Table 12 below displays the descriptive statistics for fluency in their written texts measured at the time of pretest and posttest.

Table 12: Descriptive Statistics (Fluency)

Group		Pretest	Posttest	Means
DF ($n=14$)	Mean	39.50	37.07	38.29
	SD	14.08	10.48	12.28
DWCF ($n=18$)	Mean	49.11	54.11	51.61
	SD	16.89	16.53	16.71
Total ($N=32$)	Mean	44.31	45.59	44.98
	SD	15.48	13.51	14.49

A two-way repeated measures ANOVA was also performed to examine the WCF effect on fluency. The null hypothesis that the variances between two groups are homogenous based on Box's Test of Equality of Covariance result is accepted, as evidenced by $F(3, 125015)=2.995$, $p=.43$. Leven's Test result shows that the variances of pretest ($F(1, 30)=3.06$, $p=.520$) are homogenous. Though the variance of the posttest ($F(1, 30)=2.83$, $p=.041$) was slightly heterogeneous, the extent of heterogeneousness might not seriously affect the result. As shown table 13 below, the interaction between time and treatment ($F(1, 30) = 2.466$, $p = .127$), and the effect of the within variable, time ($F(1, 30) = .295$, $p = .591$) was not significant. There was a significant difference in the effect of WCF types on fluency between two groups

($F(1, 30) = 7.730, p = .009$). In other words, DWCF improved the fluency significantly compared with DF group, but the effect of DWCF on fluency over time was not significantly different from that of DF.

Table 13: Repeated Measures ANOVA (Fluency)

Source		SS	df	MS	F	P	η^2
<i>Between</i>							
	Treatment	2796.668	1	2796.668	7.730**	.009	.205
	Error	10854.270	30	361.809			
<i>Within</i>							
	Time	26.036	1	26.036	.295	.591	.010
	Time×Treatment	217.286	1	217.286	2.466	.127	.076
	Error	2643.714	30	88.124			

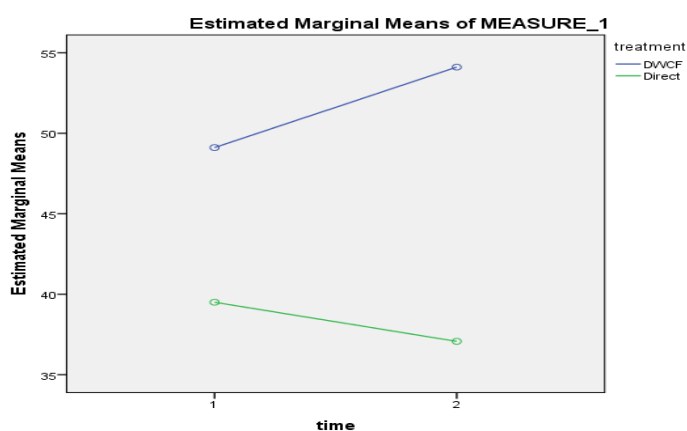


Figure 3: Fluency development

5.2 The Relationship Between Learner Variables and the Effect of WCF on Accuracy

Research question 2 examined the role of learner variables on the effect of WCF on the development of accuracy in the participants' Korean composition. Table 14 below shows the descriptive statistics for the motivation and anxiety scores of each group. An independent sample t-test result showed that there was no significant difference in motivation ($t(30)=-0.057, p=0.955$) and anxiety scores ($t(30)=-0.535, p=0.599$) between the two groups.

Table 14: Descriptive Statistics for The Motivation and Anxiety Scores

	Group	M	SD	Minimum	Maximum
motivation (1-6 Likert scale)	DWCF (N=18)	78.94	8.185	63	92
	DF (N=14)	79.14	11.522	60	102
anxiety (1-5 Likert scale)	DWCF (N=18)	52.61	9.198	34	64
	DF (N=14)	55.07	15.183	26	75

Repeated measures ANCOVA was computed to examine how the learner variables (motivation and anxiety) are related to the effect of WCF on accuracy. A two groups \times two times (pretest and posttest) ANCOVA with motivation as a covariate was conducted. As shown in Table 15, there was no statistically significant effect of motivation as a covariate. Additionally, a Pearson correlation analysis was also performed. As for accuracy gains, the pretest scores in accuracy were subtracted from the posttest scores in accuracy. The correlation analysis also presents that there was no significant relation between accuracy gains and motivation ($r=-0.07$).

Table 15: Repeated Measures ANCOVA for Accuracy with Motivation as the Covariate

Source	SS	df	MS	F	P
<i>Between Students</i>					
Motivation	1062.599	1	1062.599	8.311**	.007
Treatment	520.047	1	520.047	4.070	.053
Error	3707.893	29	127.858		
<i>Within Students</i>					
Time	21.184	1	21.184	.852	.364
Time×Motivation	2.983	1	2.983	.120	.732
Time×Treatment	5.243	1	5.243	.211	.649
Error	721.028	29	24.863		

Table 16 below displays the result of repeated measures ANCOVA with anxiety as a covariate. The result shows no statistically significant effect of anxiety on students' accuracy development, either. No significant correlation between accuracy gains and anxiety ($r=0.07$) also confirmed this result.

Table 16: Repeated Measures ANCOVA for Accuracy with Anxiety as the Covariate

Source	SS	df	MS	F	P
<i>Between Students</i>					
Anxiety	377.737	1	377.737	2.494	.125
Treatment	414.146	1	414.146	2.734	.109
Error	4392.755	29	151.474		
<i>Within Students</i>					
Time	9.578	1	9.578	.386	.539
Time×Anxiety	4.598	1	4.598	.185	.670
Time×Treatment	6.334	1	6.334	.255	.617
Error	719.413	29	24.807		

6 Conclusion

This study examined whether there is a difference in the effect of DF and DWCF on the accuracy, complexity, and fluency of KFL learners' newly written text over time. The result demonstrates that both DF and DWCF group significantly improved accuracy in new pieces of writing, but the difference between the two groups was not significant. Unlike Truscott's (2004, 2007) claim, no tradeoff between accuracy and complexity development was identified; in other words, accuracy improvement did not result in the learners' simpler texts. Both groups improved complexity, but complexity development was not statistically significant. As for fluency, the DWCF outperformed the DF group. Even though there was a significant difference in the effect of treatment between groups, its effect was not significant over time. As for the second research question, the result shows no significant correlation between learner affective variables (motivation and anxiety) and accuracy gains resulted from WCF treatment.

Though no statistically significant difference in the effect between DF and DWCF was found, the current study reported that both treatment groups improved accuracy and complexity in the students' newly written texts. One difference between DF and DWCF, however, was the impact on fluency: fluency improved in the DWCF and decreased in the DF group. As opposed to Truscott's contention that error correction has a potential detrimental effect on fluency development, the DWCF group provides the evidence that both accuracy and fluency have improved. Though it does not reveal statistical significance, it is noteworthy to examine why fluency in DF group rather decreased over time. One hypothesis is that students in DF group

might need more time to produce accurate sentences than those in DWCF group, who could reduce time via the required subsequent revision processes. To specify, only those in DWCF group were asked to revise their texts based on the feedback they received. Therefore, they might have time to better understand the grammatical rules while editing, which results in reducing time to create correct sentences during in-class writing. On the other hand, the learners in DF group only checked their errors, which should have helped them become aware of their frequent errors or their pattern of errors. This awareness, however, might necessitate more time to process the linguistic information they received via feedback in order to make error-free sentences while writing in class. No requirement of revision in DF group can be another reason, because repeated writing practice without WCF is reported to be effective for developing accuracy in using English articles (Sheen et al., 2009). Although accuracy and fluency development cannot be considered as the same construct of L2 writing, it seems that writing practice itself definitely contributes to L2 writing development.

Though there was no significant mediating effect of learners' attitudes on the effectiveness of WCF, a Pearson correlation analysis shows that there was a significant association between accuracy and motivation (for the pretest score $r=-0.39$; for the posttest score $r=-0.46$). In other words, motivation is significantly correlated with students' accuracy in the pretest and posttest, but motivation does not significantly affect the effectiveness of WCF. This might be explained by the FL context of the KFL classroom; learners in FL contexts tend to develop their linguistic knowledge at a slower pace than those in SL contexts. In other words, the participants in a majority of the previous WCF studies conducted in ESL contexts (Bitchener & Knoch, 2008a, 2009; Chandler, 2003; Evans et al., 2011; Ferris & Roberts, 2001; Hartshorn et al, 2010; Sheen, 2011; Sheen et al., 2009) or writing intensive programs (Bitchener & Knoch, 2010; Kurzer, 2017) have already reached certain level of proficiency of English. By contrast, the participants in the current study are close to the beginning-level learners and have studied Korean for only three semesters. It seems that a certain level of Korean proficiency might be a premise to examine the association between the effectiveness of WCF and learners' attitude in KFL context. Though they are highly motivated, their development in writing proficiency can be so slow that no remarkable relationship between WCF effect and affective variables can be identified. Otherwise, a longer longitudinal study is required to identify their correlation.

This study has some limitations. First, it is difficult to conclude whether the two WCF treatments were effective in accuracy development or not in the absence of a control group. This research question will be better addressed when compared with a control group. Second, the sample size was quite small, so the result of this study needs to be interpreted with caution. Third, the feedback given to all students could have been inconsistent throughout the nine writing practice tasks. Unlike focused feedback, WCF was given to all grammatical features comprehensively. Since the types of errors students made were various, I might not have responded consistently to the same errors in all the learners' texts over time. However, this study has benefits in that the effects of a different WCF type, DWCF, were examined in a KFL context where DF is most prevalent. In the previous studies conducted mostly in the ESL and EFL contexts, DWCF was reported to have a significant impact on accuracy improvement, but not on complexity and fluency development (Evans et al., 2011). The result of this study suggests the potential impact of DWCF on fluency improvement in KFL context, as the fluency development of DF and DWCF shows the opposite pattern. Future studies can better address this research question, the effect of different types WCF in KFL contexts, when conducted in Korean composition class in a longer term, taking KFL learners' low progress in writing into consideration.

References

- Akiyama, Y., & Fleshler, M. (2013). Effects of dynamic written corrective feedback on JFL students' homework. In K. Kondo-Brown, Y. Saito-Abbot, S. Satsutani, M. Tsutsui, & A. K. Wehmeyer (Eds.), *New perspectives on Japanese language learning, linguistics, and culture* (pp. 49–68). Honolulu, HI: National Foreign Language Resource Center.
- Ashwell, T. (2000). Patterns of teacher response to student writing in a multiple-draft composition classroom: Is content feedback followed by form feedback the best method? *Journal of Second Language Writing*, 9(3), 227–257.
- Biber, D., Gray, B., & Poonpon, K. (2011). Should we use characteristics of conversation to measure grammatical complexity in L2 writing development? *TESOL Quarterly*, 45, 5–35.
- Bitchener, J. (2008). Evidence in support of written corrective feedback. *Journal of Second Language Writing*, 17(2), 102-118.
- Bitchener, J., & Knoch, U. (2008a). The value of written corrective feedback for migrant and international students. *Language Teaching Research*, 12(3), 409-431.
- Bitchener, J., & Knoch, U. (2008b). The value of a focused approach to written corrective feedback. *ELT Journal*, 63(3), 204-211.
- Bitchener, J., & Knoch, U. (2009). The relative effectiveness of different types of direct written corrective feedback. *System*, 37(2), 322-329.
- Bitchener, J., & Knoch, U. (2010). Raising the linguistic accuracy level of advanced L2 writers with written corrective feedback. *Journal of Second Language Writing*, 19(4), 207-217.
- Bitchener, J., & Storch, N. (2016). *Written corrective feedback for L2 development*. New York: Multilingual Matters.
- Bitchener, J., Young, S., & Cameron, D. (2005). The effect of different types of corrective feedback on ESL student writing. *Journal of Second Language Writing*, 14, 227–258.
- Bruton, A. (2010). Another reply to Truscott on error correction: Improved situated designs over statistics. *System*, 38(3), 491-498.
- Byon, A. S. (2005). Teaching composition in the advanced KFL class. *Journal of Korean Language Education*. 16-1: 299 - 325.
- Chandler, J. (2003). The efficacy of various kinds of error feedback for improvement in the accuracy and fluency of L2 student writing. *Journal of Second Language Writing*, 12(3), 267-296.
- Cheng, Y. S. (2004). A measure of second language writing anxiety: Scale development and preliminary validation. *Journal of second language writing*, 13(4), 313-335.
- Cho, E. S. (2013). A study of language learner's cognition about error correction related with learner variable - Focused on contrast between Japanese learners and Chinese learners. *emwunhak*. 73-106.
- Choi, E. J. & Kim, Y. J. (2011). Teachers' corrective feedback and learners' uptake in Korean beginner class. *The Applied Linguistics Association of Korea* 27(1), 107-129.
- Chung, B. (2015). Written corrective feedback: The perception of Korean EFL learners. *Journal of Pan-Pacific Association of Applied Linguistics*, 19(2), 75-88.
- Cumming, A., Kantor, R., Baba, K., Erdosy, U., Eouanzoui, K., & James, M. (2005). Differences in written discourse in independent and integrated prototype tasks for next generation TOEFL. *Assessing Writing*, 10(1), 5–43.
- Damron, J., & Kim, Y. J. (2009). A Study on the Students' Error Feedback Preferences According to Proficiency Level. *hankwuke kyoyuk* 20(2), 337-358
- DeKeyser, R. (2001). Automaticity and automatization. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 125–151). Cambridge, UK: Cambridge University Press.
- DeKeyser, R. (2007). Skill acquisition theory. In B. VanPatten & J. Williams (Eds.), *Theories in second language acquisition* (pp. 97–113). Mahwah, NJ: Lawrence Erlbaum.


- Dong, D., & Kim, Y. J. (2015). Effects of conference feedback on form accuracy improvement in Chinese Korean learners' writing. *Korean Education, 103*, 223-254
- Dörnyei, Z., & Taguchi, T. (2009). *Questionnaires in second language research: Construction, administration, and processing*. New York, London: Routledge.
- Dörnyei, Z. (2010). The relationship between language aptitude and language learning motivation. In E. Macaro (Ed.), *Bloomsbury companion to second language acquisition* (pp. 247-267). London: Bloomsbury
- Ellis, R., & Barkhuizen, G. (2005). *Analyzing learner language*. Oxford: Oxford University Press.
- Ellis, R., Sheen, Y., Murakami, M., & Takashima, H. (2008). The effects of focused and unfocused written corrective feedback in an English as a foreign language context. *System, 36*(3), 353-371.
- Emig, J. (1983). *The web of meaning: Essays on writing, teaching learning and thinking*. Upper Montclair, NJ: Boynton/Cook.
- Evans, N. W., Hartshorn, K. J., McCollum, R. M., & Wolfersberger, M. (2010). Contextualizing corrective feedback in second language writing pedagogy. *Language Teaching Research, 14*(4), 445-463.
- Evans, N., Hartshorn, K. J., & Strong-Krause, D. (2011). The efficacy of dynamic written corrective feedback for university-matriculated ESL learners. *System, 39*, 229-239.
- Fathman, A. K., & Whalley, E. (1990). Teacher response to student writing: Focus on form versus content. In B. Kroll (Ed.), *Second language writing: Research insights for the classroom* (pp. 178-190). Cambridge: Cambridge University Press.
- Ferris, D. R. (1997). The influence of teacher commentary on student revision. *TESOL Quarterly, 31*, 315-339.
- Ferris, D. R. (1999). The case for grammar correction in L2 writing classes: A response to Truscott (1996). *Studies in Second Language Acquisition, 8*, 1-10.
- Ferris, D. R. (2003). *Response to student writing: Implications for second language students*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Ferris, D. R. (2004). The "grammar correction" debate in L2 writing: Where are we, and where do we go from here? (and what do we do in the meantime...?). *Journal of Second Language Writing, 13*(1), 49-62.
- Ferris, D. R. (2006). Does error feedback help student writers? New evidence on the short- and long-term effects of written error correction. In K. Hyland & F. Hyland (Eds.), *Feedback in second language writing: Contexts and issues* (pp. 81-104). New York: Cambridge University Press.
- Ferris, D. R. (2010). Second language writing research and written corrective feedback in SLA: Intersections and practical applications. *Studies in Second Language Acquisition, 32*(2), 181-201.
- Ferris, D. R. (2011). *Treatment of error in second language student writing (2nd ed.)*. Ann Arbor, MI: University of Michigan Press.
- Ferris, D., & Hedgcock, J. S. (1998). *Teaching ESL composition: Purpose, process, and Practice*. Mahwah, NJ: Lawrence Erlbaum.
- Ferris, D., & Roberts, B. (2001). Error feedback in L2 writing classes: How explicit does it need to be? *Journal of Second Language Writing, 10*(3), 161-184.
- Guénette, D. (2007). Is feedback pedagogically correct?: Research design issues in studies of feedback on writing. *Journal of Second Language Writing, 16*(1), 40-53.
- Hartshorn, K. J., & Evans, N. W. (2012). The differential effects of comprehensive corrective feedback on L2 writing accuracy. *Journal of Linguistics and Language Teaching, 3*(2), 217-247.
- Hartshorn, K. J., & Evans, N. W. (2015). The effects of dynamic written corrective feedback: A 30-week study. *Journal of Response to Writing, 2*. 6-34.

- Hartshorn, K. J., Evans, N. W., Merrill, P. F., Sudweeks, R. R., Strong-Krause, D., & Anderson, N. J. (2010). Effects of dynamic corrective feedback on ESL writing accuracy. *TESOL Quarterly*, 44(1), 84-109.
- Jin, J. H. (2005). Corrective feedback and learner uptake in Korean classroom. *Bilingual Research*, 28, 371-390.
- Jung, J. Y. (2010). A classroom study on the efficacy of interactional feedback for Korean particles. *Journal of Korean Language Education*, 21(4), 255-282.
- Kim, E. H. (2016). A conversation analytic approach to corrective feedback in the KFL classroom. *Emwunloncip* 65, 145-185.
- Kim, E. J. (2006). Heritage language maintenance by Korean-American college students. In Kondo-Brown, K. (Ed.). *Heritage language development: Focus on East Asian immigrants* (Vol. 32). Philadelphia: John Benjamins Publishing.
- Kim, J. S. (2008). The effect of direct and indirect feedback on the postpositional mistakes: targeting on Vietnamese learners. *Bilingual Research* 36, 93-114.
- Kormos, J., & Trebits, A. (2012). The role of task complexity, modality and aptitude in narrative task performance. *Language Learning*, 62(2), 439-472.
- Krashen, S.D. (1981). *Second language acquisition and second language learning*. Oxford: Pergamon.
- Krashen, S.D. (1982). *Principles and practices in second language acquisition*. Oxford: Pergamon.
- Krashen, S.D. (1985). *The input hypothesis: Issues and implications*. London: Longman.
- Kurzer, K. (2017). Dynamic written corrective feedback in developmental multilingual writing classes. *TESOL Quarterly*, 52(1), 5-33.
- Kyle, K., & Crossley, S. (2018). Measuring syntactic complexity in L2 writing using fine-grained clausal and phrasal indices.
- Lalande, J. F. (1982). Reducing composition errors: An experiment. *The Modern Language Journal*, 66(2), 140-149.
- Language Testing International (2017, August 15). *How long does it takes to become proficient?* Retrieved August 15, 2017, from <http://www.languagetesting.com/how-long-does-it-take>
- Lee, I. (2011). Working smarter, not working harder: Revisiting teacher feedback in the L2 writing classroom. *Canadian Modern Language Review*, 67(3), 377-399. doi:10.3138/cmlr.67.3.377
- Lee, S. (2009). The efficacy of dynamic written corrective feedback on intermediate-high learners' writing accuracy. Unpublished master's thesis, Brigham Young University, Provo, Utah, USA.
- Lim, S. J. (2008). Effects of recasts on the morphological acquisition by learners of Korean as a second language. *Korean Journal of Applied Linguistics*, 24(1), 271-292.
- Liu, Q., & Brown, D. (2015). Methodological synthesis of research on the effectiveness of corrective feedback in L2 writing. *Journal of Second Language Writing*, 30, 66-81.
- Norris, J. M., & Ortega, L. (2009). Towards an organic approach to investigating CAF in instructed SLA: The case of complexity. *Applied Linguistics*, 30, 555-578.
- Park, E. S., Song, S., & Shin, Y. K. (2016). To what extent do learners benefit from indirect written corrective feedback? A study targeting learners of different proficiency and heritage language status. *Language Teaching Research*, 20(6), 678-699
- Park, J. H. (2007). The effect on reduction of form errors in student writing according to teacher feedback methods. *Journal of Korean Language Education* 18-1: 131 - 154.
- Polio, C., & Shea, M. C. (2014). An investigation into current measures of linguistic accuracy in second language writing research. *Journal of Second Language Writing*, 26, 10-27.
- Schmitt, N., Dornyei, Z., Adolphs, S., & Durow, V. (2004). Knowledge and acquisition of formulaic sequences. In Schmitt, N. (Ed.). (2004). *Formulaic sequences: Acquisition*,

- processing, and use* (Vol. 9). (p.55–86). Amsterdam/Philadelphia: John Benjamins Publishing.
- Sim, J. K. (2016). A study on perception of Korean language teachers' composition feedback. *Kwukceyemwun* 70, 303-328.
- Reid, J. (1998a) "Eye" learners and "ear" learners: Identifying the language needs of international students and U.S. residents writers. In P. Byrd & J. M. Reid (Eds.), *Grammar in the composition classroom: Essays on teaching ESL for college-bound students* (pp. 3-17). Boston, MA: Heinle.
- Robb, T., Ross, S., & Shortreed, I. (1986). Salience of feedback on error and its effect on EFL writing quality. *TESOL quarterly*, 20(1), 83-96.
- Schmitt, N., Dornyei, Z., Adolphs, S., & Durow, V. (2004). Knowledge and acquisition of formulaic sequences. *Formulaic Sequences Acquisition, Processing and Use*, 55-86.
- Semke, H. D. (1984). Effects of the red pen. *Foreign language annals*, 17(3), 195-202.
- Sheen, Y. (2007). The effect of focused written corrective feedback and language aptitude on ESL learners' acquisition of articles. *TESOL Quarterly*, 41(2), 255-283.
- Sheen, Y. (2011). *Corrective feedback, individual differences and second language learning*. NY: Springer.
- Sheen, Y., Wright, D., & Moldawa, A. (2009). Differential effects of focused and unfocused written correction on the accurate use of grammatical forms by adult ESL learners. *System*, 37, 556-569.
- Shintani, N., Ellis, R., & Suzuki, W. (2014). Effects of written feedback and revision on learners' accuracy in using two English grammatical structures. *Language Learning*, 64(1), 103-131.
- Truscott, J. (1996). The case against grammar correction in L2 writing classes. *Language Learning*, 46, 327-369.
- Truscott, J. (2004). Evidence and conjecture: A response to Chandler. *Journal of Second Language Writing*, 13, 337-343.
- Truscott, J. (2007). The effect of error correction on learners' ability to write accurately. *Journal of Second Language Writing*, 16, 255-272.
- Truscott, J., & Hsu, A. Y. P. (2008). Error correction, revision, and learning. *Journal of Second Language Writing*, 17(4), 293-305
- Valdés, G. (2001). Heritage languages students: Profiles and possibilities. In J. K. Peyton, D. A. Ranard, & S. McGinnis (Eds.), *Heritage languages in America: Preserving a national resource* (pp. 37-77). Washington, DC: Center for Applied Linguistics/Delta Systems.
- Van Beuningen, C. G., De Jong, N. H., & Kuiken, F. (2012). Evidence on the effectiveness of comprehensive error correction in second language writing. *Language Learning*, 62(1), 1-41.
- Wigglesworth, G. (2008, April). Measuring accuracy in second language performance. Paper presented at the Annual Conference of Teachers of English to Speakers of Other Languages (TESOL), New York, NY.
- Wolfe-Quintero, K., Inagaki, S., & Kim, H. (1998). *Second language development in writing: Measures of fluency, accuracy, and complexity*. Honolulu: University of Hawaii at Manoa.
- Zamel, V. (1983). The composing processes of advanced ESL students: Six case studies. *TESOL Quarterly*, 17, 165–187.

Appendix A

Writing Correction Marks

	Code	Error Type	Example
Spelling & Lexical errors	WC	Word Choice	두 시간 다음에 친구를 만났어요. 한국어 수업에 있 은 후에 다른 수업에 가요.
	S	Spelling	11 씨 반에 수업이 있어요. 숙 재 가 많아요.
	No/Co	Number/Counter	저는 오 시에 일어나요.
	Hon	Honorifics	나는 할머니 에게 떡을 줘요.
Grammatical errors	VF	Verb Form	쥐가 고양이한테 잡 아요.
	T	Tense	저는 보통 7시에 깎 어요. 커피를 마시면 수업 시간에 안 잡 어요.
	CJ	Conjugation	집에 가서 샤워 해고 저녁을 먹어요.
	SS	Sentence Structure (incl. Run-on and incomplete)	풀 타임 (full-time)으로 수업을. 너무 멀어서 일찍.
	W O	Word Order	그래서 닭갈비 배우기 만들어요.
	NE	Negation	못 기억을 했다. 이번 학기에 세 주 밖에 남았다.
	Pa	Particle	오늘은 7시 반 일어났어요. 나는 아침 이 먹었어요.
	Mo	Modifiers	일 끝나 다음에 친구를 만나요.
Discourse & Other errors	CONN	Connective	시간이 있을 때 한국 드라마를 봐요. 그래도 스트레스(stress) 있을 때 한국 드라마를 봐요.
	AWK	Awkward wording	저는 보통 7시에 일어나서 학교에 갈 준비를 하 잡 아요.
	^	Insert something	나는 요리하는 아주 좋아해요.
		Delete something	저는 내가 집에 가서 공부해요
	?	Meaning is not clear	수업 업서써 그래서 모이가 췌요.

Appendix B

Student Background Questionnaire

Name: _____ Major: _____
 Class Standing: _____ (e.g., freshman) Age: _____

Q1. Birthplace: U.S. Korea
 Other (specify) _____

Q2. Check if your parents, grandparents, or anyone else in your immediate/extended family is a **native speaker of Korean**.

Mother Father
 Maternal grandparent(s) Paternal grandparent(s)
 Other (specify) _____

Q3. Which language do you consider your native Language?

English Korean Chinese Japanese Other (specify) _____

Q4. Have you lived in Korea?

No
 Yes (For _____ years)
 From age _____ to age _____)

Q5. Have you visited to Korea?

No
 Yes (For _____ [length of the stay],
 How often? _____
 When was your last visit to Korea? Year _____)

Q6. Which language do you communicate with the following people? Please circle the number. If the situation does not apply to you, choose "N/A."

Relationship	N / A	All English (or other non-Korean language)	More English (or other non-Korean language)	Same (mixing two languages equally)	More Korean	All Korean
Mother	0	1	2	3	4	5
Father	0	1	2	3	4	5
Siblings	0	1	2	3	4	5
Grandmother	0	1	2	3	4	5
Grandfather	0	1	2	3	4	5
Relatives	0	1	2	3	4	5
Others: specify ()	0	1	2	3	4	5

Q7. List the following information for any previous Korean studies elsewhere (e.g., high school, intermediate/elementary school, Korean language school, private language institute, private tutor, etc.).

School 1: Number of years taken: _____ Most recent year taken: _____
 School 2: Number of years taken: _____ Most recent year taken: _____

Q8. Which language skill do you want to improve most (**Mark all that apply**).

1. Listening 2. Reading 3. Speaking 4. Writing 5. All of them

Q9. Please mark ONE statement which BEST describes how you feel about your Korean language use in writing:

1. My Korean grammar/ language problems are very serious and really hurt my writing.

2. Korean grammar is not a serious problem for me.
3. I'm not sure if it's a problem.
4. Other writing issues are more important.
Please specify _____

Q10. In your opinion, what is the best way for a Korean teacher to give feedback about your grammar/language errors in your writing?

1. Correct all of my errors for me.
2. Correct only most frequent or serious errors
3. Circle errors and label them by type
4. Circle but don't correct errors
5. Others

Please specify _____

Appendix C

Motivation and Anxiety Questionnaire

Section _____

Name _____

This survey is conducted to better understand the thoughts and beliefs of learners of Korean. The result of this survey will be used for research purpose and teaching practice only. Please read each instruction and report your agreement or disagreement toward each statement using **1~6 scale**. This is not a test so there are no “right” or “wrong” answers. Please circle the number that best indicates the extent to which you agree or disagree with the statement. Please answer to the questions truthfully, as only this will guarantee the success of the investigation.

	strongly disagree	disagree	slightly disagree	slightly agree	agree	strongly agree
Reasons for studying Korean						
1. I want to learn Korean so that I can visit Korea some time.	1	2	3	4	5	6
2. I want to improve Korean so that I can enjoy and learn more about Korean dramas, movies, and music.	1	2	3	4	5	6
3. I want to be fluent as Koreans living in Korea.	1	2	3	4	5	6
4. I would like to know more about Korean people.	1	2	3	4	5	6
5. I have to study Korean, because, if I do not study it, I think my parents will be disappointed with me	1	2	3	4	5	6
6. Maintaining and improving Korean language proficiency is important to recover my root and identity as Korean.	1	2	3	4	5	6
7. I want to be fluent in Korean so that I can teach my children Korean later.	1	2	3	4	5	6
8. I want to be fluent in Korean to be actively involved in Korean communities.	1	2	3	4	5	6
9. The only reason that I am taking Korean language course is to fulfill the foreign language requirement	1	2	3	4	5	6
10. Studying Korean is important to me because I am planning to study abroad or get a job in Korea.	1	2	3	4	5	6
11. I want to learn Korean so that I can major or minor in Korean studies.	1	2	3	4	5	6
12. I have to learn Korean because without passing the Korean course I cannot graduate.	1	2	3	4	5	6
13. I want to learn more about Korean tradition, history and culture.	1	2	3	4	5	6
14. I want to learn Korean so that I can learn more about my heritage.	1	2	3	4	5	6
15. Studying Korean can be important to me because I think someday it will be useful for my future career.	1	2	3	4	5	6
Feeling for studying Korean						
16. I really enjoy learning Korean.	1	2	3	4	5	6
17. I want to take as many as Korean language courses as possible to improve my Korean proficiency.	1	2	3	4	5	6
18. I want to avoid taking Korean classes if possible.	1	2	3	4	5	6
19. I am sure I have a good ability to learn Korean.	1	2	3	4	5	6
20. It is impossible to master Korean even though I make a lot of effort.	1	2	3	4	5	6
21. I am sure I will be able to write in Korean comfortably if I continue studying.	1	2	3	4	5	6
22. I like the atmosphere of my Korean class.	1	2	3	4	5	6
23. I believe that I will be capable of speaking and understanding more texts in Korean if I keep studying it.	1	2	3	4	5	6

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Please report your agreement or disagreement toward each statement using **1~5 scale**. Please circle the number that best indicates the extent to which you agree or disagree with the statement.

strongly disagree	disagree	no strong feeling either way	agree	strongly agree
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<i>Attitude for studying Korean (Anxiety)</i>					
1. My mind often goes blank when I start to work on a Korean composition.	1	2	3	4	5
2. I feel nervous when I write Korean compositions under time pressure.	1	2	3	4	5
3. I feel comfortable when I write Korean compositions even under time pressure.	1	2	3	4	5
4. I often choose to write down my thoughts in Korean.	1	2	3	4	5
5. I usually do my best to avoid writing Korean compositions.	1	2	3	4	5
6. Unless I have no choice, I would not use Korean to write compositions.	1	2	3	4	5
7. I would do my best to excuse myself if asked to write Korean compositions.	1	2	3	4	5
8. I usually seek every possible chance to write Korean compositions outside of class.	1	2	3	4	5
9. While writing in Korean, I'm not nervous at all.	1	2	3	4	5
10. While writing Korean compositions, I feel worried and uneasy if I know they will be evaluated.	1	2	3	4	5
11. I don't worry that my Korean compositions are a lot worse than others.	1	2	3	4	5
12. If my Korean composition is to be evaluated, I would worry about getting a very poor grade.	1	2	3	4	5
13. I'm afraid of reading my Korean composition in class.	1	2	3	4	5
14. I'm not afraid at all that my Korean compositions would be rated as very poor.	1	2	3	4	5
15. My thoughts become jumbled when I write Korean compositions under time constraint.	1	2	3	4	5
16. I do my best to avoid situations in which I have to write in Korean	1	2	3	4	5
17. Whenever possible, I would use Korean to write compositions.	1	2	3	4	5
18. I'm afraid that the other students would deride my Korean composition if they read it.	1	2	3	4	5
19. I don't worry at all about what other people would think of my Korean compositions.	1	2	3	4	5