Repetition and Repair in EFL Writers’ Revision

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Abstract

The present study explores second language (L2) learners’ use of repetition and repair in regard to their first language (L1) and L2 during their revision of L2 written text. Participants were 24 Japanese university students of English as a foreign language (EFL). This study analyzed repetition and repair by both process- and product-oriented data. Repetition, particularly repetition spoken in English was very commonly used in the processes of revision. Of all changes related to repetitions (N = 250), 169 changes (68%) were linguistically successful. Furthermore, during revision the participants tended to use L2 repetition frequently as a cognitive means for hypothesis testing or eliciting implicit knowledge, whereas they tended to utilize repetition spoken in their L1 to retrieve L2 explicit knowledge. With regard to linguistic types of text changes related to repetition, sentence-level repetition occurred most frequently, and lexical and morphological repetition followed.

1. Introduction

The present study explores intermediate L2 learners’ use of repetition and repair in regard to their first language (L1) and second language (L2) during revision of their L2 written compositions.

Repetition has been studied mainly regarding L2 learners’ spoken discourse (Duff, 2000; Fathman, 1980; Pica & Doughty, 1988; Roebuck & Wagner, 2004; Seliger, 1980). A few studies (DiCamilla & Anton, 1997; Villamil & Guerrero, 1996) examined repetition with regard to written discourse. However, to my knowledge, no research focuses on repetition in L2 writers’ revision.

1.1 Functions of Repetition

Repetition has been considered to have two main functions, which are important for second language learning in the field of second language acquisition (SLA) research (Duff, 2000; Skehan, 1998): 1) cognitive function; and 2) social function (Brown, 2000; Duff, 2000; O’Malley et al., 1985; Skehan, 1998). Repetition is regarded as one of means to provide L2 learners with a chance for hypothesis testing or time for planning in spoken discourse.

Repetition has discursive roles including social functions in spoken discourse: (a) to maintain a conversation; (b) to show a response to utterances of an interlocutor; and (c) to show
acceptance of utterances or participation of interlocutors (Duff, 2000; Skehan, 1998; Tannen, 1989). These studies have not quantitatively examined frequency of L2 learners’ repetition.

1.2 Repetition as Repair

Repetition has been studied in regard to repair or correction in the field of SLA research (Fathman, 1980; Lyster, 1998; Seliger, 1980; Shonerd, 1994). The findings of these studies indicate that learners’ repair often appears with their repetition in spoken discourse. Notably, repair is considered to have an important function to give learners opportunities to proceduralize L2 knowledge which is already internalized as a declarative explicit knowledge (Lyster & Ranta, 1997; Shehadeh, 2001). Shonerd (1994) reviews empirical research on repetition in spoken discourse and summarizes that L2 learners’ repair of morphemes has a tendency to have low success rates to become more target-like. However, to my knowledge, no studies of L2 learners’ repetition has examined with regard to repair in written discourse. Furthermore, repetition and repair have been analyzed in spoken discourse between a native speaker (NS) and non-native speaker(s) (NNS) (Fathman, 1980; Lyster, 1998; Seliger, 1980). Lyster’s study (1998) examined NS teachers’ repetition and learners’ repair in the L2 classrooms. It is important to explore the functions of L2 learners’ repetition in regard to their L2 knowledge in the process of revising their own written text.

In the present study, text changes that participants made in their written drafts are considered to be comparable to repair (Lyster, 1998) or correction (Fathman, 1980; Seliger, 1980) in spoken discourse. Repetition and repair are analyzed by both process- and product-oriented data: participants’ think-aloud protocols during their revision, first drafts, and revised drafts.

Most studies of L2 revision have examined the effect of peer or teacher feedback (Ferris, 2003a, 2003b; Liu & Hansen, 2002; Williams, 2004), or strategy instruction (Sengupta, 2000) on revision. Surprisingly very little of the research has reported on the effect of a revision task without intervention or teacher instruction. It is important to identify what features of L2 writers’ own writing they could and could not improve by themselves during revision in order to develop effective instructions for L2 revision.

1.3 Repetition and Language

Regarding L1 use of L2 revision, Villamil and Guerrero (1996) demonstrated L2 writers employed repetition spoken in L1 during their peer revision. DiCamilla and Anton (1997) suggest that repetition in both L1 and L2 has a function to develop intersubjectivity, “a shared perspective of the task” in the process of collaborative L2 writing (p.623). However, no research on repetition in regard to use of L1 and L2 focuses on L2 writers’ self-revision.

1.4 Think-Aloud Protocols

The present study employs think-aloud protocols for analysis of learners’ use of repetition.
Think aloud protocols have been employed as a means of inquiry in the field of cognitive psychology (Ericsson, 2002, 2003; Ericsson & Simon, 1987, 1993) and SLA research (Gass & Mackey, 2000). Repetition in think-aloud protocols can show learners’ processes of accessing L2 knowledge. However, reactivity of think-aloud reports has been criticized with regard to validity.

Think aloud reports may influence participants’ performance while verbalizing processes of a problem-solving task, which gives rise to the reactivity problem. Thinking aloud might change learners’ cognitive processes while engaging. Furthermore, some research indicates that verbal reports can change participants’ thought processes and thus potentially may have reactivity effects on task performance (Chi, 2000; Ericsson & Simon, 1993; Swain, 2006). For example, Ericsson and Simon (1993) suggested that verbalization has three levels. Level 1 verbalization is the vocalization of current thought process in an oral form (e.g., talking about thinking processes while writing). Level 2 verbalization involves reporting thoughts that are not in a verbal form (e.g., talking about thinking processes while solving a puzzle). Level 3 verbalization involves explaining and reasoning about the thought. Ericsson and Simon claimed that Level 1 and 2 verbalization tend to have little reactivity effects. In the present study participants’ think-alouds are considered to be Ericsson and Simon’s Level 1 verbalization.

1.5 Research Question

Based on the previous literature review above, the present study examines the following research question: What functions does L1 and L2 repetition have for improvement of L2 writers’ written draft in the processes of revision?

2. Method

2.1 Participants

Twenty-four Japanese second year university students of English as a foreign language (EFL) who enrolled in a general English course volunteered to participate in this study. They were all registered in the English department at a private university in Japan. They were from a middle class socio-economic background. The present study was conducted in the middle of the semester. The students were placed in the class by their results on the TOEFL ITP test (Test of English as a Foreign Language Institutional Testing Program) developed from the past TOEFL tests by the Educational Testing Service (ETS). Participants took the TOEFL ITP before the course started in April. The mean of participants’ scores on the TOEFL ITP test was 515.3 and the standard deviation was 22.7.

2.2 Grouping of Participants

The present study used a part of the data of my dissertation study of L2 learners’ self-revision and peer revision (Suzuki, 2006). The current study focuses on the data of
self-revision. In the dissertation study, to compare self-revision and peer revision, two groups A and B, were formed randomly in reference to the following criteria: individual participants’ means of the deviation values of their recent scores on the TOEFL ITP test, two raters’ holistic assessments and the total number of words of the participants’ written drafts that they had written at the end of the previous semester as course work.

The means and the standard deviations of ages in each group (Groups A and B) were almost the same ($M = 20.1$ vs. $M = 19.8$; $SD = 0.5$ vs. $SD = 0.8$). Each group’s mean and standard deviation of length of English learning were also similar ($M = 9.0$ year vs. $M = 8.8$ year; $SD = 2.3$ vs. $SD = 1.7$). Group A consisted of ten female and two male students, whereas Group B comprised eight female and four male students.

2.3 Procedure

The data were collected over two weeks in the middle of the semester in the language laboratory at their school, where their class was always held. In both weeks participants wrote an essay of Test of Written English (TWE) of Educational Testing Service (ETS) for 30 minutes at first. The participants’ teacher and I selected two essays for Writing Task 1 and Writing Task 2, considering these two prompts might be as equivalent as possible in structure, difficulty, and participants’ interest (Appendix A). Then, in the first week, Group A students (the Self-revision Group) listened to the think-aloud instructions that I had tape-recorded and practiced how to think aloud while solving a multiplication problem. The instruction tape and the handout (a script of the instructions) were made based on procedures suggested by Ericsson and Simon (1993). The recorded instructions were spoken in English and in Japanese. Following that, students in Group A engaged in self-revision for fifteen minutes. Students could use either Japanese (their first language) or English (their second language) in the think-aloud. The think-alouds which occurred during self-revision were tape-recorded. Group B students (the Peer Revision Group) engaged in peer revision while Group A students performed self-revision.

All participants used black pens that I distributed for the first drafts. Participants used much thicker blue pens than the black pens so that text changes that they made could be distinguishable. In the next week of Writing Task 1 (Famous Person in History) and its revision, students engaged in Writing Task 2 (Famous Entertainer or Athlete). The procedure as described above for the first writing task and its revision was repeated. However, Group A revised with their peer, while Group B performed self-revision after they wrote first drafts of writing Task 2.

2.4 Coding of Repetition

The tape-recorded data were transcribed and categorized into two types of repetition: (a) simple repetition; and (b) repetition with repair.

In the present study, repetition refers to a type of evidence in discourse or protocol analysis. Exact repeated words or phrases are defined as simple repetition (see Example 1). Simple
repetition includes repetition of segmentation which is "an isolated word or phrase from a prior utterance" (Pica, Lincoln-Porter, Paninos, & Linnell, 1996, p.7) (see Example 2). Back channel cues were sometimes found between repetitions (see Example 3). Repetitions are considered to end, where any other words or phrases except back channel cues appear.

Repetition with repair is repetition “incorporated” into repair in terms of Lyster (1998). Repetition with repair consists of repair and all or part of a previous utterance (see Example 6).

Simple repetition and repetition with repair are further separated in languages participants spoke, Japanese (L1), English (L2), and Japanese and English (L1 and L2). Examples of each type of repetition spoken in different languages are illustrated below:

[Italics = English; block letter = Japanese; parentheses = English translation; quotation marks = written text; boldface = repetition; All participants’ names were pseudonyms.]

Example 1: Simple Repetition in English
Yukino’s revision for Writing Task 1 (Famous Person in History)
Yukino: He is, he is, he is

Example 2: Simple Repetition in English
Yukino’s revision for Writing Task 1 (Famous Person in History)
Yukino: He is the famous person. He is the, the, He is the famous person.

Example 3: Simple Repetition in English
Tamako’s revision for Writing Task 1 (Famous Person in History)
Tamako: talk with, hum, talk with, talk with

Example 4: Simple Repetition in Japanese
Taro’s revision for Writing Task 1 (Famous Person in History)
Taro: daihyosaku (masterpiece), daihyosaku (masterpiece)

Example 5: Simple Repetition in English and Japanese
Natsuko’s revision for Writing Task 1 (Famous Person in History)
Natsuko: realize wa, realize wa
[“wa” is a postpositional particle to show a subject.]

Example 6: Repetition with Repair in English
Chiyoko’s revision for Writing Task 1 (Famous Person in History)
Chiyoko: American? American President? US President?
Example 7: Repetition with Repair in Japanese
Taro’s revision for Writing Task 1 (Famous Person in History)
Taro: shokuji (meals), shokuji toka (meals, etc.), shokuseikatsu toka (eating habit, etc.)

Example 8: Repetition with Repair in English and Japanese
Natsuko’s revision for Writing Task 1 (Famous Person in History)
Natsuko: kaisha no keiei (management of a company) wa, conduct ka (“conduct”?),
counter ga iikana (“conduct” is good, isn’t it?)
[“wa” and “ga” are both post positional particles to show a subject. “ka” is a particle to make
an interrogative question.]

To answer a research question (Function of Repetition), the coded data of repetition from the
think-aloud protocols were used for analysis. Simple repetition and repetition with repair were
categorized from the data. In the current study repetition which leads to text changes on written
text is called change-related repetition (CRR). The percentages of CRR per the total number of
repetition were calculated. Furthermore, each CRR was categorized by twelve linguistic types of
text changes (Appendix B).

CRR which attributes linguistically successful text changes is regarded as successful CRR.
A native speaker of English and I, both of whom teach English at several universities in Japan
separately assessed all text changes that participants made in their written drafts during revision.
Assessors judged whether each text change was successful by two scales (1 = successful, 0 =
unsuccessful). The inter-rater reliability of assessment was 81.0 by the kappa statistics. Two
assessors discussed and resolved the differences of assessment.

I calculated the percentages of successful CRR per the total number of CRR. The percentage
of successful CRR per the total number in each linguistic type and the percentage of successful
CRR per total number of repetition spoken in each language (English, Japanese, and English and
Japanese) were also calculated and analyzed.

Moreover, as a supplemental analysis, I qualitatively analyzed participants’ think-aloud
protocols during revision, comparing participants’ first drafts with revised drafts to examine the
roles of repetition for making successful text changes in written text. Particularly, this study
qualitatively analyzed cognitive functions of repetition in terms of implicit and explicit knowledge.
According to Han and Ellis (1998), implicit knowledge is automatic, intuitive, memory-based
knowledge of language, whereas explicit knowledge is conscious, analyzed, rule-based declarative
knowledge about language and meta-language. It is important that the interface of implicit and
explicit L2 knowledge should be examined in order to understand how L2 knowledge is
represented in the processes of L2 learning (Ellis, 1997, 2008).
3. Results

3.1 Types of Repetition

Simple repetition (exact repeated words or phrases) appeared more frequently than repetition with repair (repetition incorporated into repair) \((n = 299, 61\%; n = 191, 39\%\) respectively). There were no differences in success rates with regard to types of repetition. Of the total number of simple repetition \((n = 299)\), there were 130 Change-Related Repetitions (CRRs) \((43\%)\). Of these 130 CRRs, 85 \((65\%)\) were successful. As for repetition with repair, Of 120 CRRs, 84 \((70\%)\) were successful. These results are given in Table 1.

Table 1

Number and Percentage of Successful CRR per Total Number of CRRs

<table>
<thead>
<tr>
<th>Type of repetition</th>
<th>Total N</th>
<th>CRR (%)</th>
<th>Successful CRR</th>
<th>Successful CRR per All CRRs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple repetition</td>
<td>299</td>
<td>130 (43%)</td>
<td>85</td>
<td>65%</td>
</tr>
<tr>
<td>Repetition with repair</td>
<td>191</td>
<td>120 (63%)</td>
<td>84</td>
<td>70%</td>
</tr>
<tr>
<td>Total</td>
<td>490</td>
<td>250</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. CRR = change-related repetition.*

3.2 Language of Change-Related Repetition

The success rates of change-related repetition (CRR) with regard to two factors: (a) type of repetition (simple repetition and repetition with repair); and (b) language use (L1 and L2) are given in Table 2. Generally, success rates were high (higher than 60\%) except repetition with repair spoken in Japanese \((30\%)\).

3.3 Linguistic Types and Repetition

Table 3 shows the total number of successful CRRs in each linguistic type. The total numbers of successful lexical and sentence-level L2 simple repetition and L2 repetition with repair were large.

In Table 4, the total numbers of successful CRRs and the success rates with regard to linguistics types are shown. It should be noted that all the discourse-level CRRs (Organization and Paragraphing) made a high success \((100\%)\), although the total number of discourse-level CRRs was small. It is also notable that CRR related to change of pluralization and part of speech had higher success rates than other morphological CRRs.
Table 2

**Percentage of Successful Change-related Repetition (CRR) per Total Number of CRRs in Each Type of Repetition**

<table>
<thead>
<tr>
<th>Type of repetition</th>
<th>Total Number of CRRs (%)</th>
<th>Total Number of Successful CRRs</th>
<th>Success Rate (Successful CRR/CRRs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple repetition in English</td>
<td>123 (49%)</td>
<td>79</td>
<td>64%</td>
</tr>
<tr>
<td>Simple repetition in Japanese</td>
<td>4 (2%)</td>
<td>3</td>
<td>75%</td>
</tr>
<tr>
<td>Simple repetition in English and Japanese</td>
<td>3 (1%)</td>
<td>3</td>
<td>100%</td>
</tr>
<tr>
<td>Repetition with repair in English</td>
<td>101 (40%)</td>
<td>73</td>
<td>72%</td>
</tr>
<tr>
<td>Repetition with repair in Japanese</td>
<td>10 (4%)</td>
<td>3</td>
<td>30%</td>
</tr>
<tr>
<td>Repetition with repair in English and Japanese</td>
<td>9 (4%)</td>
<td>8</td>
<td>89%</td>
</tr>
<tr>
<td>Total N (%)</td>
<td>250 (100%)</td>
<td>169</td>
<td>68%</td>
</tr>
</tbody>
</table>

Table 3

**Total Number of Successful Change-Related Repetitions (CRRs) in Each Linguistic Type**

<table>
<thead>
<tr>
<th>Linguistic Type</th>
<th>ES</th>
<th>JS</th>
<th>EJS</th>
<th>ER</th>
<th>JR</th>
<th>EJR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capitalization</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Punctuation</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Spelling</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Verb-tense/Subject-verb agreement</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Article</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Pluralization</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Part of speech</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Vocabulary/Word choice</td>
<td>14</td>
<td>0</td>
<td>1</td>
<td>20</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Sentence types</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>12</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Length of sentence</td>
<td>21</td>
<td>2</td>
<td>1</td>
<td>21</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Organization</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Paragraphing</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>3</td>
<td>3</td>
<td>73</td>
<td>3</td>
<td>8</td>
</tr>
</tbody>
</table>

*Note. ES = English simple repetition; JS = Japanese simple repetition; EJS = English and Japanese simple repetition; ER = English repetition with repair; JR = Japanese repetition with repair; EJR =*
English and Japanese repetition with repair.

Table 4

**Percentage of Successful Change-Related Repetitions (CRR) per Total Number of CRRs in Each Linguistic Type**

<table>
<thead>
<tr>
<th>Linguistic Type</th>
<th>The Number of Successful CRRs</th>
<th>The Number of CRRs</th>
<th>Success Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capitalization</td>
<td>1</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Punctuation</td>
<td>2</td>
<td>3</td>
<td>67%</td>
</tr>
<tr>
<td>Spelling</td>
<td>11</td>
<td>15</td>
<td>73%</td>
</tr>
<tr>
<td>Verb-tense/Subject-verb agreement</td>
<td>14</td>
<td>23</td>
<td>61%</td>
</tr>
<tr>
<td>Article</td>
<td>8</td>
<td>14</td>
<td>57%</td>
</tr>
<tr>
<td>Pluralization</td>
<td>5</td>
<td>5</td>
<td>100%</td>
</tr>
<tr>
<td>Part of speech</td>
<td>1</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Vocabulary/Word choice</td>
<td>41</td>
<td>67</td>
<td>61%</td>
</tr>
<tr>
<td>Sentence types</td>
<td>27</td>
<td>32</td>
<td>84%</td>
</tr>
<tr>
<td>Length of sentence</td>
<td>48</td>
<td>78</td>
<td>62%</td>
</tr>
<tr>
<td>Organization</td>
<td>10</td>
<td>10</td>
<td>100%</td>
</tr>
<tr>
<td>Paragraphing</td>
<td>1</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>169</td>
<td>250</td>
<td>68%</td>
</tr>
</tbody>
</table>

3.4 Qualitative Data

I present the qualitative data to demonstrate how L2 writers utilized repetition for successful text changes on written text. As shown in the quantitative data (Tables 2 and 3), students frequently used repetition spoken in their L2 (English) during revision. They seemed to use L2 repetition as a cognitive means for hypothesis testing. In Excerpt 1, Haru (pseudonym) tried to choose an appropriate word by repeating two alternative words, “received” and “won.” Haru’s text change related to the repetition is given below:

Ryoko Tamura had received many gold medals. (first draft)

\[\rightarrow\] Ryoko Tamura had won many gold medals. (revised draft)

Excerpt 1. Haru’s revision for Writing Task 2 (Famous Entertainer or Athlete)

Haru: *won, had, had won, received, won, had won, had, had received*

For another example, Mariko added an indefinite article, “a” to a sentence below during her
revision of Writing Task 2 (Famous Entertainer or Athlete):

This is great thing as Japanese. (first draft)

→ This is a great thing as Japanese. (revised draft)

Excerpt 2 is Mariko’s revision related to the text change above.

Excerpt 2. Mariko’s revision for Writing Task 2 (Famous Entertainer or Athlete)

Mariko: "...This is great thing as Japanese," as a Japanese, as Japanese, as a Japanese. This is, this is the? (This is, what?) great thing, great? This is great thing. This is a, this is a great thing. This is a great thing as a Japanese, as a Japanese as Japanese, as a, a? as wakannaina (I don’t know, as.)

Mariko also tried out adding an indefinite article before a word, “Japanese” by repeating English phrases, “as a Japanese” and “as Japanese,” which did not lead to a substantial text change. The use of L2 repetition for hypothesis testing or retrieving implicit L2 knowledge is also seen in Excerpt 3. Yukino changed an indefinite article into a definite article in her written text:

He is a famous person. (first draft)

→ He is the famous person. (revised draft)

Excerpt 3. Yukino’s revision for Writing Task 1 (Famous Person in History)

Yukino: He is the, He is the, He is a famous person. He is the? Hum, He is the, he is a, the kana? (“the,” isn’t it?)

On the other hand, repetition spoken in L1 or both L2 and L1 during revision tended to retrieve learners’ explicit L2 knowledge (e.g., meta-language). In Excerpt 4, Yukino changed a verb tense:

Since I enter this university, I heard about a lot. (first draft)

→ Since I entered this university, I have heard about him a lot. (revised draft)

In Excerpt 4, Yukino repeated a metalinguistic term (genzaibunshi, the present participle).

Excerpt 4. Yukino’s revision for Writing Task 1 (Famous Person in History)

Yukino: “Since I enter this university, I heard about him a lot.” demo nanka okashii kiga suruna jiseiga (but I feel something wrong with a tense). enter this university, I have, kana (“enter this university, I have,” isn’t it?). kakobunshi (the past participle), genzaibunshi (the present participle), genzaibunshi (the present participle), no tsukaikata wo miruka (I will try to see the usage of the present participle, present participle.)
Excerpt 5 shows repetition of meta-language knowledge about written discourse (i.e., Coordinate conjunctions like “and” or “but” should not be used in academic writing) in Kana’s verbal protocol. Kana deleted a coordinate conjunction, “And” at the beginning of the sentence:

And I learned the joy of baseball from him. (first draft)
⇒ I learned the joy of baseball from him. (revised draft)

Excerpt 5. Kana’s revision for Writing Task 2 (Famous Entertainer or Athlete)

Kana: And wa--, And wa--, atama, bun no atama de wa tsukaenaikara (“And,” “And,” cannot be used at the beginning of a sentence, so) “I watched his playing baseball at Koshien Stadium when he was in high school.” And wa toru (I will delete “And.”).

4. Discussion

4.1 Repetition as a Means of L2 Revision

As the quantitative data show in the present study, repetition was commonly used in L2 writers’ revision. Students in this study used repetition as a means of revision (N = 490) in a 15-minute revision session. Repetition occurred 20.4 per 15 minute revision (SD = 13.6). Half of the repetition (n = 250, 51%) involved text changes (change-related repetition). Notably, 68% of change-related repetition (CRR) was linguistically successful (n = 169). The results show that repetition can play an important role in L2 revision. However, the present study did not clarify whether L2 learners’ linguistic attention induced their use of repetition, or repetition provoked writers’ attention to linguistic features in the processes.

4.2 Repetition and Language Use

With regard to language in repetition, quantitative data indicate that a large number of successful repetition was English (L2) repetition (see Tables 2 and 3). L2 repetition tended to be adopted for hypothesis testing and retrieving implicit knowledge (Excerpts 1-3), whereas L1 repetition including L1 and L2 repetition had a tendency to elicit explicit knowledge (Excerpts 4 and 5). Second language research considers that L2 learners’ interface of implicit and explicit knowledge is related to several factors such as task type (spontaneous vs. planning; memory-based vs. rule-based) or time limitation (Bialystok, 1990; Ellis, 2004, 2008; Han & Ellis, 1998). The results of the present study suggest that intermediate-level L2 students like participants in the current study should use L2 repetition in order to access their L2 implicit knowledge directly. However, EFL students like participants in the present study tend to learn and use L2 metalinguistic knowledge by a means of L1 as the qualitative data show (Excerpts 4 and 5). L1 repetition might be also important particularly for EFL learners. The functions of implicit and explicit knowledge in the processes of L2 revision should be further examined with regard to
language (e.g., L1 or L2) and learning context (e.g., ESL or EFL context). Importantly, in Ellis’ weak interface model of SLA, explicit knowledge is considered to play the role as “a facilitator of implicit knowledge” (Ellis, 2008, p.428).

Furthermore, since the present study examined repetition in participants’ think-aloud protocols, the effect of repetition on L2 revision can be attributed to positive reactivity of think-aloud. For example, Stratman and Hamp-Lyons (1994) show the results of their pilot study to examine reactivity in think-aloud protocols. They suggest that think aloud “may systematically influence the correction of organizational-level errors, and the amount and kind of microstructural meaning-changes” in the processes of writing (p.108). However, their study was not systematic, thus they propose larger-scale experimental research on reactivity.

4.3 Linguistic Types and Repetition

Regarding linguistic types of text changes related to repetition, surface-level Change-Related Repetitions (CRRs) occurred most frequently (n = 129), and sentence-level and discourse-level CRRs followed (n = 110, 11, respectively). As reviewed earlier, there was no quantitative research on L2 learners’ repetition and repair on written text. Fathman (1980) studied ESL children’s repetition and correction in oral speech. In her study, lexical correction occurred most frequently, and the frequency of morphological, semantic, and syntactic correction followed in that order. The results of the present study cannot be compared with those of Fathman (1980) because her participants’ first languages (Spanish and Korean), age (children), cultural or social backgrounds, or language learning context (ESL) were different from participants’ in this study. However, syntactic correction or repair (i.e., sentence-level CRRs) may occur more frequently during a writing task than in a speaking task. In the present study sentence-level CRRs occurred most frequently (n = 110), and lexical CRRs (Vocabulary/word Choice, n = 67) and morphological CRRs (Verb-tense/Subject-verb agreement, Article, Pluralization, Part of speech) (n = 43) followed.

Shonerd (1994) reviewed repair in spontaneous speech and summarizes that L2 learners who make morphological repair tend to make high error rates in its repair. The success rates of morphological change-related repetition except Pluralization and Part of speech (100%) were not very high (Article, 57%; Verb-tense/Subject-verb agreement, 61%) in the present study. Participants in this study might have already acquired pluralization and part of speech, compared to other English morphemes. The results confirmed previous research on developmental sequences of morphemes (Ellis, 2008; Lightbown & Spada, 2006). Moreover, the success rate of article changes in the present study was low. The results are consistent with the results of previous L2 writing studies (Ferris & Roberts, 2001; Swan & Smith, 1987). Swan and Smith indicate that articles are one of problematic linguistic features for Japanese English learners’ writing. Ferris and Roberts (2001) report that morphology (Verb-tense/Subject-verb agreement, Articles) and lexis (Vocabulary/Word choice) are typical L2 writers’ errors.
5. Conclusion

The current study was a small-scale exploratory study done in one classroom with a select group of Japanese students performing just one task type within short time durations. The present study did not consider other important known factors such as L2 or L1 educational and sociocultural backgrounds, gender, age, or teacher instructions on students’ repair (revision). Furthermore, this study focuses on repetition which is only one of several means of L2 learning and writing. The present study does not clarify whether think-aloud protocols illustrate learners’ implicit L2 knowledge, which is not considered to be directly reported in the field of SLA research (Ellis, 2008), or whether thinking out loud (verbalizing) repetition facilitates learners’ L2 processing during their revision. In spite of the limitations, this study empirically indicates the importance of repetition in revision of L2 writing and learning. The study also suggests further research on L2 learners’ repetition in the process of revision, particularly with regard to learners’ L1 and L2 use, and their proficiency.

Acknowledgments

I would like to thank Alister Cumming, Paul Kei Matsuda, and Wataru Suzuki for their insightful comments on an earlier version of this manuscript. I am grateful to the ARELE reviewers for their incisive comments on the present article. I am solely responsible for the positions taken and any errors that may remain in this article. I also thank the participants, their teacher, and their school staff for their cooperation in my study.

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other problems. Cambridge: Cambridge University Press.

Appendix A

Prompts for Writing Task 1 and Writing Task 2
Writing Task 1: If you could travel back in time to meet a famous person from history, what person would you like to meet? Use specific reasons and examples to support your choice.
Writing Task 2: If you could meet a famous entertainer or athlete, who would that be, and why? Use specific reasons and examples to support your choice.

Appendix B

Linguistic Type of Text Changes to which Change-Related Repetition (CRR) Related

<table>
<thead>
<tr>
<th>Surface-level</th>
<th>Linguistic type</th>
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<tbody>
<tr>
<td></td>
<td>Capitalization</td>
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<td></td>
<td>Punctuation</td>
</tr>
<tr>
<td></td>
<td>Spelling</td>
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<tr>
<td></td>
<td>Verb-tense/Subject-verb agreement</td>
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<tr>
<td></td>
<td>Article</td>
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<tr>
<td></td>
<td>Pluralization</td>
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<td></td>
<td>Part of speech</td>
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<tr>
<td></td>
<td>Vocabulary/Word choice</td>
</tr>
<tr>
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<td>Sentence types</td>
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<td></td>
<td>Length of sentence</td>
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<tr>
<td>Discourse-level</td>
<td>Organization</td>
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<td></td>
<td>Paragraphing</td>
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