The Interplay of Silent Reading, Reading-while-listening and Listening-only

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ABSTRACT

Leading scholars (Gilbert, 2009; Walter, 2008) have highlighted the importance of phonological processing in learning to read. Nevertheless, reading in Japan has traditionally been taught without adequate attention to the role of phonological processing. Accordingly, it was speculated that Japanese university students would demonstrate superior reading comprehension to listening comprehension skills. This study consists of two trials. The first was a comparison of the comprehension of the same text by three classes of 33, 32, and 44 students respectively, in three different modalities: silent reading, reading-while-listening, and listening only. The second was a retrospective longitudinal study of a class of twenty-one students who performed reading-while-listening and listening-only over a fifteen-week semester. The first study confirmed that the students’ reading comprehension exceeded their listening comprehension. In the second study, students were evenly divided as to whether they preferred reading-while-listening or listening-only.

INTRODUCTION

Not only are both listening and reading skills important for L2 English learners, they are also interdependent. Anderson and Lynch (1988) explain the common role of general language processing which underpins each skill and argue that improving listening skills can lead to improved reading comprehension. Koda (2007) insists “in all languages, reading builds on oral language competence” (p. 1). Not least because of its impact on reading skills, the acquisition of listening skills by Japanese university students of English merits attention.

In order to attain listening proficiency learners must develop skills specific to the task of listening. Lexical segmentation, defined by Field as “the identification of words in connected speech” (2003, p. 327), poses a serious barrier to listening comprehension for L2 learners of English. Similarly, Brown et al. (2008) explained that the challenges Japanese students face in listening comprehension are due to “negotiating the seamless nature of connected speech” (p. 149). Individual words of spoken English are not perceived by adult native listeners as single
units, who rather “use their knowledge of the phonological regularities of their language, its lexicon, and its syntactic and semantic properties, to compensate for the shortcomings of the acoustic signal” (Anderson & Lynch, 1988, p. 23). Accordingly, it would be unreasonable to expect English language learners to be able to segment the stream of speech into single words by virtue of the acoustic signal alone.

The first part of this study compares the comprehension of the same text in the three modes of silent reading, reading-while-listening, and listening-only, by three classes of students within the medical faculty, undertaking compulsory English classes. It is anticipated that listening-only is the most difficult of the three because of the challenge of lexical segmentation unique to this mode of input.

It is important to confirm this because an understanding of spoken English facilitates an understanding of written English (Walter, 2008). Listening skills underpin and facilitate the acquisition of literacy because reading is an aural process. Neuroscientist Stanislas Dehaene explains the essentially aural function of reading: “Any expert reader quickly converts strings into speech sounds effortlessly and unconsciously” (2009, p. 29).

The second focus of this study is a comparison of the perspectives of a class of English majors on the relative merits of silent reading and reading-while-listening. In contrast to the first study, this one is a retrospective longitudinal study of a class who completed weekly homework over a fifteen-week semester of simultaneously reading-while-listening to audio-books, and then listening-only to the same audiobooks.

**LITERATURE REVIEW**

**Does Listening Facilitate Reading?**

Recent studies have suggested that reading-while-listening can assist in fostering reading skills. For example, Chang and Millet (2015) evidenced a superior rate of reading, and level of reading comprehension, for audio-assisted reading (reading-while-listening) over silent reading. Many of the essential communicative features of English, such as rhythm and intonation, must be superimposed on the text by the reader. The ability to do this derives from competence in oral communication. In the case of first language acquisition, children’s auditory knowledge provides a foundation for the later development of literacy (Bryant & Bradley, 1985; Christie, 1984; Willis, 2008). According to Cook (2000) rhyme and rhythm are “an aid to, even a precondition, of literacy” (p. 26).

Referring to learning L2 English, Gilbert (2009) claims that rhythm and phonemic awareness provide a foundation for the later acquisition of literacy. Accordingly, it is anticipated that facilitating the development of listening comprehension by L2 learners will facilitate their reading skills. In an extensive review of the research, Taguchi et al. (2016) emphasize the
facilitative effect of prosody in L2 reading comprehension. A study by Brown and Haynes (1985) suggests that the facilitative effect of listening comprehension on reading comprehension may be a neglected area in EFL in Japan. The Japanese students in their study demonstrated the comprehension of words by sight rather than making connections between the spelling and the sound, unlike the L1 Arabic- and Spanish-speaking students of L2 English.

Woodall (2010) compared the reading comprehension and fluency gains of two groups of ESL students in Puerto Rico. The experimental group of 69 students undertook listening-while-reading, and the control group of 68 students undertook reading only. The experimental group outperformed the control group in comprehension but not fluency. Woodall concludes that listening while reading benefits reading comprehension for L2 learners of English. He suggests that this may be because the readers “can devote more of their processing capacity to comprehension if they are freed from using those mental resources for decoding” (p. 196). He gives a further explanation of the comprehension gains as being due to Vygotsky’s (1978) zone of proximal development, in which the teacher provides the assistance which is necessary until the learner can function on their own. In this case, the audio-book functions as the teacher.

Do Silent Reading and Reading-While-Listening Facilitate Listening?

An alternative question is whether the acquisition of reading skills facilitates listening skills. Unlike spoken English, words in written English are separated with spaces. These spaces provide the learner with evidence of word boundaries which is not apparent in the stream of speech.

Brown et al. (2008) suggest that students may wish to transition from reading-while-listening to listening-only, or from reading-only, to reading-while-listening, and then to listening only, in order to prime themselves before attempting listening-only (p.157). They discovered that students preferred reading-while-listening to the other modes because the narrators segmented the text for them. Chang (2011) suggests that extensive reading-while-listening to audio-books improves both the speed and accuracy of listening. Chang and Millet (2014) recommend focusing on reading-while-listening before attempting listening-only, and argue that these skills can be transferred to unfamiliar passages (p. 37).

Does Silent Reading Impair Listening?

Indeed, some suggest that reading may create expectations which are not borne out in listening: “learners’ expectations of what they will hear are sometimes unduly influenced by exposure to the written language” (Field, 2003, p. 330). Chang and Millet (2014) explain the possibility that learners may depend on the written script at the expense of the aural input.
The stream of speech changes the pronunciation of individual words according to the articulation of the words which appear before and after. Spelling does not reflect these changes, and speakers are generally unaware of them (Dehaene, 2009). The act of silent reading in L2 English will not sensitize the readers to the ways in which the pronunciation of words changes according to the contextual sounds.

Milton et al. (2010) distinguish between phonological and orthographic representations in the mental lexicon. Words with a phonological representation may not necessarily be represented orthographically, and vice-versa. Milton et al. argue that L2 learners who are good readers may not necessarily be good at listening comprehension because of weaknesses in converting graphemes to phonemes. Their reasoning suggests that poor grapheme to phoneme conversion may be a source of difficulty in listening comprehension.

Eastman (1991, cited in Vandergrift & Goh, 2009) recommends delaying teaching reading until learners have familiarized themselves with “the cognitive processes that underlie real life listening” (p. 403). This view implies that reading comprehension does not necessarily facilitate listening comprehension. Rather than having students infer word boundaries from reading, teachers can draw students’ attention to prosodic features of intonation and stress which segment the stream of speech into individual words (Vanderbilt & Goh, 2009).

Accordingly, some researchers recommend reading-while-listening as a prerequisite of listening-only, whereas others recommend establishing a foundation of listening comprehension before learning to read. Isozaki (2014) recommends variations to reading-while-listening, such as having learners control the pace of their reading and listening and having the option of reading and listening simultaneously or separately. There are cases for both the facilitative role of listening on reading comprehension, and that of reading proficiency on listening comprehension.

Research Questions

1. Are students more proficient at reading-while-listening, silent reading, or listening-only?
2. Do students prefer reading-while-listening to stories, or listening-only to stories?
3. What are the difficulties of each mode according to the students themselves?

METHODOLOGY

Study 1

Question 1: Are students more proficient at reading-while-listening, silent reading, or listening-only?
Participants.

Three classes of first-year university students taking a compulsory English unit were selected to participate in a simultaneous cross-sectional trial. The three classes were chosen from departments with similar average TOEIC® IP (TOEIC® Institutional Program) scores, Medicine (n=33), Dentistry (n=32), and Pharmacy (n=44). The average TOEIC® IP score of each department in 2016 was 501.3, 450.9, and 463.6, respectively. They were provided with the same text in three different modes: listening-only (Medicine), reading-while-listening (Pharmacy), and silent reading (Dental). We anticipated that listening-only would be the most difficult, so we assigned this task to the class from the department with the highest average TOEIC® IP scores, the Medicine students. We informed the students of the purpose of the research and obtained their consent.

Text.

A text was adapted from a personal essay written by one of the authors, which had originally appeared in Adanna Literary Journal (see Appendix 1). The text was 411 words in length, and at a level of 6.5 on the Flesch-Kinkaid scale. An audio-recording was made by three speakers from different parts of the English-speaking world, in order to control for the variety of English. The first reader was a Canadian male from Newfoundland, the second was an American female who was born and raised in Michigan, and the third was a female from South Australia. The timing of the readings were 2 minutes 54 seconds, 3 minutes 20 seconds, and 3 minutes 26 seconds. A five second interval was inserted between each recording, coming to a total of 9 minutes 45 seconds. Because the audio-recording was 9 minutes 45 seconds in total, we decided to allocate the same time to the Silent Reading class. The vocabulary was not modified for English language learners. After some debate, we decided to include the word ‘stethoscope’ despite its low frequency of use because of the contextual clues provided by the text.

Procedure.

The tests were conducted in a CALL classroom and the students entered their responses to multiple choice questions (see Appendix 2) on the computers. We added questions about their perception of the difficulty of the task in Japanese. They responded in Japanese, and the first author of this paper, who is a native speaker of Japanese and has been teaching English at several national and private universities in Japan for about 30 years, translated their responses into English.

Study 2

Questions 2 & 3.

2. Do students prefer reading-while-listening to stories, or listening-only to stories?
3. What are the difficulties of each mode according to the students themselves?

Participants.

Twenty-one second-year-English majors, including one mature-age student, were required to simultaneously read and listen to graded readers for homework over a fifteen-week semester. We were not able to obtain as large a sample as for Study 1 because of the small number of students who major in English at the university. All students provided consent to participate in the questionnaire at the end of the semester.

Texts.

Students chose a book each week from a large selection of graded EFL readers from a range of publishers and levels in the university library’s English language section.

Procedure.

Students were instructed to only choose readers which were accompanied by a CD recording for their weekly homework. They were instructed first to read and listen to the story simultaneously, and then to listen-only to the same story. They were also required to produce one essay per week in response to questions which were set by the teacher each week. (These essays do not form part of the current study). At the end of the semester, students responded to a written questionnaire designed to elicit their preferences for reading-while-listening or listening-only. The questionnaire was administered in Japanese. Most of the answers were provided by the students in Japanese, and as was done in Study 1, one of the authors, who is a native speaker of Japanese and university English teacher, translated them into English. Several of the respondents provided answers in English, and these appear unedited.

RESULTS AND DISCUSSION

Study 1

Are students more proficient at silent reading, reading-while-listening, or listening-only?

As expected, the students in the listening-only group had the lowest mean score, with an average of 67.88. The mean scores of the reading-while-listening and silent-reading groups were 88.41 and 86.56, respectively (See Table 1). This difference is not statistically significant, and the proximity of these scores is of interest. Chang and Millet’s (2015) longitudinal study revealed higher gains in comprehension and rate of reading for audio-assisted reading than silent reading, but they nevertheless highlight the gains achieved by the silent readers. They suggest that the small improvement in the students who undertook reading without audio-assistance may be due to the luxury of unhurried reading and being able to look up unfamiliar words. In our
study, the proximity of the reading-while-listening to the silent reading scores suggests familiarity with the pedagogical practice of silent reading, arguably for the reasons suggested by Chang and Millet (2015), or because of translation into Japanese while reading (Leane et al., 2015).

As many as 21.2% of the students in the listening-only group judged the test to be difficult, while only 11.4% of those in the listening-while-reading group considered this to be the case. Only 6% in the listening-only group responded that the test was “easy,” while 50% in the silent reading group deemed the test “easy” (See Figure 2). When the data for the listening-only section were plotted, they revealed a non-parametric distribution. We could not assume the homogeneity of variances among the three samples by Bartlett test (p = 0.00081), either. Accordingly, rather than being analysed by a T-test and ANOVA, they were analysed using Mann-Whitney U test, Kruskal-Wallis H test, and Steel-Dwass pairwise ranking test for non-parametric distribution (see Table 2).

Table 1. Statistical Summary of listening-only, silent-reading and reading-while-listening

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
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<tr>
<td>L-only</td>
<td>33</td>
<td>67.88</td>
<td>23.82</td>
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<tr>
<td>SR</td>
<td>32</td>
<td>86.56</td>
<td>17.34</td>
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<tr>
<td>RWL</td>
<td>44</td>
<td>88.41</td>
<td>12.75</td>
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</table>

Table 2. Non-parametric test results

<table>
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<th>df</th>
<th>p-value</th>
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<tr>
<td></td>
<td>20.4</td>
<td>71</td>
<td>3.59e-05 *</td>
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</table>

<table>
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<tr>
<th>Steel.Dwass</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR &amp; L-only</td>
<td>3.53</td>
<td>1.7e-03 **</td>
</tr>
<tr>
<td></td>
<td>85008</td>
<td>1.7e-03 **</td>
</tr>
<tr>
<td>RWL &amp; L-only</td>
<td>4.23</td>
<td>6.9e-05 **</td>
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<tr>
<td></td>
<td>12024</td>
<td>6.9e-05 **</td>
</tr>
<tr>
<td>RWL &amp; SR</td>
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<td>6.9e-01</td>
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<td></td>
<td>82583</td>
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<tr>
<td>---------------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>SR &amp; L-only</td>
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<td>0.00021</td>
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<tr>
<td>RWL &amp; L-only</td>
<td>327</td>
<td>0.00e-05**</td>
</tr>
<tr>
<td>RWL &amp; SR</td>
<td>682.5</td>
<td>4.0799</td>
</tr>
</tbody>
</table>

***p < .001, **p < .01, *p < .05

**Figure 1:** Comparison of test scores for reading-while-listening, silent reading, and listening-only
Figure 2: A Comparison of Student Perception of Test Difficulty for Reading-while-listening, Silent Reading, and Listening-only

Responses to reading-while-listening. (See Figure 3)

The students in this group had the highest overall scores. However, 11 of 44 students responded incorrectly to Question 3 (concerning transportation) and 10, which asked to what the lights were pulsing in time. Eight students responded with a) the drums, indicating that they read and/or heard the word “drums,” but did not understand it in context as a simile. Although one student felt that “it was really difficult!!” another responded that it was “too easy so it wasn’t interesting.” Others replied, “The English was easy but the meaning of the content was unclear;” “Because the text was read three times for us, the English text was easy to understand…However, the content of the story was hard to understand;” “I knew what they were saying, but the expressions were literary so parts of it were hard to understand.” These comments suggest that the students understood individual words, but were unable to follow the narrative. However, at least one student found that having the text aided in comprehension: “If it were only the recording, I probably wouldn’t be able to understand, but there was a text, so it was easy to understand.”

One student wrote “I was able to mentally translate it into Japanese while I listened, so it was easy to listen to,” suggesting that the slow pace and repetition of the recorded readings allowed enough time for translation. This also seems to indicate that some students are not able to process English without first rendering it into Japanese. Another wrote, “I could understand most of it because of the written text. However, I did not only depend on the script, but confirmed by listening with my eyes shut.” While Chang and Millet (2015) suggested that reading may impair listening, this student seems to have relied more on listening than reading. Some students’ comprehension of the text may also be compromised by having to read along at a certain pace, which supports Isozaki’s (2014) findings.
Responses to silent reading. (See Figure 4)

The students in the silent reading group had more correct responses to Questions 1 and 9 than in the listening-only group. All of the incorrect responses to the first question were identical, with five students choosing a) take a vacation. Possibly this response was inferred from the question itself, and the students’ expectations of travel. Only 18 of 32 students correctly answered Question 3, concerning the mode of transportation around the island, in spite of relying solely on the text.

Twelve commented that the text was “easy.” According to one, “The reading level was about the same as the long comprehension passage in the Center Exam.” Another replied, “even if there were a few difficult words I couldn’t understand, I was easily able to guess them from the context.”

As with the listening-only group and the reading-while-listening group, some students seemed to struggle with the content: “It was abstract and I couldn’t understand the content at all.” “It was hard to imagine what was happening in the second half.” “I am from Tokushima so I could easily follow the protagonist’s route. However, I had trouble understanding what happened on the journey.” Perhaps these responses are due to cultural differences in expectations of how a family celebrates a milestone birthday, or the unusual nature of the art space. It is likely that students fill in gaps in comprehension with their own experiences.
Responses to listening-only. (See Figure 5)

The students in the listening-only group had the least number of correct responses to Questions 3, 1, and 9, obtaining 3, 18, and 19 of 33 respectively (see Appendix 2). The third question asks about the author’s mode of transportation. The correct answer is b) electric bicycle; however, “electric” is only mentioned once in the text. In further references, the author refers to simply “bicycle.” Fifteen students selected a) bicycle as their response. This reply is also probably consistent with their personal experience, as many of them use bicycles – not electric bicycles – as a mode of transportation.

The first question asks the purpose of the author’s trip. Eleven students responded with a) take a vacation, which they may have inferred from the question itself. As one student commented, “Recording a heartbeat is not an everyday occurrence, so at first I couldn’t get it.” Students may have guessed the response to Question 9, as well, which asked what covered the walls in the Archives of the Heart room, as the incorrect answers were varied, but logical. Seven students selected a) paintings, a reasonable guess considering that the author had mentioned an “art space.” One student reported, “I could more or less answer the questions, but I could hardly understand the story.”

Seven students stated that they had difficulty understanding the passage after listening the first time. Their reasons were as follows: “The first recording was hard to understand, but the second and third ones were relatively easy;” “It was hard to understand the man’s voice, but the two women were easy to understand;” “the first reader was a little hard for me to understand. I am a little used to the second one (probably Sensei) so it was easy to understand. The third reader’s English was pronounced very clearly so it was easy to confirm my understanding.” Most respondents felt that the grammar and vocabulary were not too difficult. Although the students
were encouraged to take notes while listening, one student wrote, “there was a section I couldn’t answer because I had not taken notes and forgot.”

![Figure 5: Test scores for the Listening-only group](image)

**Study 2**

**Question 2: Do students prefer reading-while-listening to stories, or listening-only to stories?**

As previously discussed, the role of reading-while-listening (audio-assisted reading) has received support from Chang and Millet (2015). A further question is whether students prefer reading-while-listening or listening-only to audio-recordings of stories. It is speculated that reading-while-listening draws attention to the words as individual units of meaning, and that listening-only to stories fosters a global understanding of the story because the individual units of meaning are not highlighted. In contrast to Study 1, which provided a cross-section of responses from three classes to questions based on a single text presented in different modalities, Study 2 refers to a single class over a 15-week semester. Each week they borrowed a graded EFL reader of their choice. They were instructed to first read and listen simultaneously to the story, and then listen-only to the same story. Then they responded to the following question:

*Which has been easier to understand, reading-while-listening or listening-only? Please explain your choice.*
Eleven of the twenty-one respondents preferred listening-only, and the other ten preferred reading-while-listening.

**Reasons for preference of listening-only**

The eleven respondents who preferred listening-only provided the following reasons: “Because it flows;” “When following the written text, I tried to understand it so much that I didn’t listen properly. If I am listening only, I listen while thinking about the general content, so it’s fast;” “Because I can adjust to the speed of the recording and read the text;” “If for a general understanding, I can understand more quickly by listening only than reading it in detail;” “I think when I listen to only voice, I can speak shadowing. When I read and listen, it maybe takes a time;” “When I read it I look up unfamiliar words and end up taking a break;” “I don’t get behind looking up words;” “I followed the voice not to think anything;” “If I am not pursuing accuracy, it is faster to listen without attention;” “Because I can grasp the meaning of the phrasing at once;” and, “If I have the text, I force myself to read it until I thoroughly understand it.”

**Reasons for preference of reading-while-listening.**

The ten of the twenty-one respondents who preferred reading-while-listening provided the following reasons: “It is easier to grasp the plot by just reading with my eyes and trying to understand the necessary information;” “I can understand the story some time;” “Because I could understand how does it mean;” “There is a script, and it’s easy to understand where the accent is on each word;” “By listening I can somehow or other understand the story;” “Listening only means it is sometimes impossible to understand;” “I feel reassured to confirm the sound with the text;” “When it was listening only, I had to listen to the part I couldn’t catch over and over again;” “Because I could read while reading ahead to see which words were coming next.”

The results of this study differed from those of Brown’s (2007) study of 48 first-year-university-English-language students and Brown et al.’s (2008) study of 35 first- and third-year-university students of English literature. Brown (2007) and Brown et al. (2008) compared preferences for reading-while-listening, reading only, and listening-only. Our Study 2 was limited to a comparison of reading-while-listening with listening-only. As many as 58% of Brown’s respondents and 72% of Brown et al.’s respondents preferred reading-while-listening, compared to 48% of our respondents. Forty percent of Brown’s respondents and 28% of Brown et al.’s respondents preferred silent reading (‘reading-only’), the category which was not measured in our Study 2. Only one of Brown’s respondents and 0% of Brown et al.’s respondents preferred listening-only, compared to 48% of those in our study. Unlike the respondents in Brown (2007) and Brown et al.’s (2008) studies, many of our students preferred listening-only. We cannot dismiss the possibility that they may have chosen differently if we had included the category of silent reading. Nevertheless, they may have genuinely enjoyed listening-only. Reasons they provided are that they appreciated the flow, and that they were somehow freed from the necessity of attending to details. This is an encouraging finding because the practice of listening is the language skill most in need of development and is also a skill which facilitates reading.
Limitations

The limitations of both of these studies should be acknowledged, such as the nature of the sample and the sample size. In the first study, the three classes were compulsory classes from the medical faculty, and therefore they cannot be considered representative of students from different faculties, and students who elect to study English. A limitation of the second part of this study is the small sample size, and it needs to be replicated with a larger sample.

A further limitation to the first study is the length of the listening passage and limited number of comprehension questions. Further studies of longer listening passages and more comprehension questions are warranted.

CONCLUSIONS AND RECOMMENDATIONS

First-year students from three departments within the medical faculty, taking compulsory English classes, were tested on their comprehension of a single text delivered in different modalities. They demonstrated superior comprehension skills in the silent reading task to the listening-only task, and superior skills in the reading-while-listening task to the other two tasks. Given the facilitative role of listening comprehension on reading comprehension, these results suggest that improved ways of teaching listening comprehension should be developed. For example, Woodall’s (2010) recommendation that teachers conduct simultaneous reading while listening activities in the classroom as a means of engaging the zone of proximal development, could be adopted. Stephens (2017) has provided examples of classroom activities which centre around the activity of the teacher providing a live reading of a story. Finally, Wood (2017) recommends that teachers either provide simultaneous listening and reading materials, or that students listen to the text before reading it. Because the field is still emerging, Wood advises that teachers experiment with different modes of delivery.

The second study consisted of twenty-one second-year-English majors taking a compulsory English class. They were given extensive mentoring over the importance of listening proficiency over a semester, and demonstrated equal preferences for reading-while-listening to listening-only. Despite having chosen to major in English, approximately half of them preferred to simultaneously listen to a recording while following the script. With encouragement, the other half of the class was able to emancipate themselves from the script.

The question arises as to why reading comprehension should be easier than listening comprehension, and why some students prefer to have the support of a written text to facilitate their listening. Arguably this is a consequence of traditional pedagogical practices. Kikuchi (2015) identifies the continued implementation of traditional classroom practices such as memorization, slavishness to the textbook, and grammar translation (p. 77). These practices may detract from class time devoted to understanding spoken text. Koda (2007) explains how reading skills, that is, orthographic knowledge, require the “effortless extraction of phonological and morphological information from a printed word” (p. 4). Perhaps the students in this study were more adept at extracting morphological than phonological information from the written texts.
The students may be able to retrieve the phonological information for a word in isolation, but not in the stream of speech. Koda (2007) explains that L2 readers from an L1 with a logographic writing system may have difficulty accessing the phonemic aspects of words from an alphabetic system. L1 readers of Japanese may find it challenging to extract the phonemic information from an alphabetic writing system such as English. Further research needs to identify reasons for the superior proficiency of reading to listening skills and attempt to remedy it.

If the trend of prioritizing reading over listening proficiency continues, neither reading nor listening skills will be optimally facilitated. The development of listening proficiency will enhance not only listening skills but also reading skills. The necessity of phonological processing in learning to read has already been made explicit in Walter’s (2008) seminal paper; Phonology, in second language reading, is “not an optional extra,” she reminds us in her title. Further action research needs to be directed at refining pedagogical techniques to foster listening comprehension. As Isozaki (2014) and Wood (2017) recommend, teachers should experiment with innovative ways of presenting reading and listening activities to continue to refine and inform our teaching practice.

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APPENDIX 1

Heartbeats on Teshima by Suzanne Kamata

The day after my family forgot my birthday, I decided to take a solo trip to the island of Teshima and record my heartbeat. If my husband and children weren’t going to do something special for my special day, then I would find a way to mark it myself.

I took a bus from our home in Tokushima to Takamatsu and walked to the ferry terminal where I bought a roundtrip ticket to Teshima. The early autumn weather was perfect: not too hot, not too cold.
About half an hour later, I arrived at Teshima, rented an electric bicycle, and set out to explore. Soon, I came upon a restaurant. Many of my fellow ferry passengers had already stopped here. Their rented bicycles were lined up in the parking area. I made this my first stop.

After finishing my lunch, I paid my bill.

I coasted down the hill following signs to the beach. I parked my bike and stood on the shore for a moment listening to the waves lapping upon the sand. I went down a jungle path until I reached a rustic wooden building.

A young woman behind a desk explained that I could record my heartbeat if I wanted to, and it would be added to the archives. Or, I could just enter the art space.

“I want to record my heartbeat,” I said.

She smiled and directed me into a small, private room where there was a computer and a stethoscope. I read the instructions in English and typed in a simple message: “It’s good to be alive.”

I pressed the stethoscope to my chest, clicked on “begin” and waited for forty seconds without moving while my heart went “ba BOOM ba BOOM.” When I was finished, I went back into the waiting area. The young woman prepared a CD of my heartbeat for me to take home as a souvenir. “Now you can listen to your heartbeat,” she said. The rhythms of my heart had been added to those of over 40,000 others.

I opened the door to the “Archives of the Heart.” The room was dark except for a single lightbulb that hung from the ceiling. The walls were covered with many mirrors. The light pulsed in time to the percussion of heartbeats. Some were loud, like thunder. They sounded like drums, those hearts from all over the world, from people of many ages, everyone so alive.

APPENDIX 2

Multiple Choice Questions
1. The author went to Teshima in order to
   a) take a vacation
   b) visit her children
   c) record her heartbeat
   d) spend time with her husband Answer c

2. The weather was
   a) cold
   b) cool
   c) neither too hot nor too cold Answer c
   d) hot

3. She travelled around Teshima by
   a) bicycle
   b) electric bicycle
   c) ferry
   d) coach Answer b

4. She paid the bill for
   a) her lunch
   b) a tour
   c) her bicycle
   d) her electric bicycle Answer a

5. At the beach she listened to
   a) the birds
   b) the children playing
   c) her i-pod
   d) the waves Answer d
6. In the rustic building she was directed to
   a) a small, private room
   b) a concert hall
   c) a classroom
   d) an elevator Answer a

7. She typed a message onto the computer saying
   a) Teshima is wonderful.
   b) Today is my birthday.
   c) I want to go home.
   d) It's good to be alive. Answer d

8. The young woman gave her
   a) some food for the deer
   b) a CD
   c) a rice cracker
   d) a sweet potato cake Answer b

9. The walls in the Archives of the Heart room were covered with
   a) paintings
   b) wallpaper
   c) mirrors
   d) photographs Answer c

10. The lights in the room were pulsing in time to
    a) the drums
    b) the music
    c) the waves
    d) the heartbeats Answer d