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The Effect of Reading While Listening to Audiobooks: Listening Fluency and Vocabulary Gain

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Fluency has received little attention in L2 language instruction. This study investigates the effects of reading while listening (RWL) to audiobooks on EFL learners' listening fluency and its by-product, vocabulary gain. This 26-week (2 semesters, 13 weeks in each) study involved 19 students of comparable English proficiency. In all, 7 students voluntarily took part in the RWL treatment throughout, while 12 received the usual formal instruction to serve as a control group. Test instruments involved a pre- and post-test of an 80-item (40 multiple choice and 40 items of dictation) listening test delivered at a speech rate of 160 words per minute and a vocabulary levels test. After the 26-week intervention, the RWL group outperformed the control group in both vocabulary gain and the listening scores. The RWL group improved more than 100% on dictation scores, implying that RWL increased students' speed in the listening process. Regarding the vocabulary levels test, the RWL group gained 17 marks (approximately equal to 566 individual words), but only 4 marks (or 123 individual words) for the control group. The RWL group studied a total of 86 books in the first 13 weeks and another 156 books in the second 13 weeks, increasing 81% in quantity. Students also studied longer and more difficult books in the second semester. Based on such successful outcomes, the study calls for more and larger scale studies of this kind.

Introduction

In 1982, Davies published "Training Fluency: An Essential Factor in Language Acquisition and Use," a work that stressed the importance of developing fluency in language learning and provided guidance for developing it. However, 28 years later, Grabe (2009; 2010) observed that little research directly supporting fluency development practices in second/foreign language contexts (L2 hereafter) existed, in particular, reading skills. While reading fluency is under-researched, listening fluency is nearly non-existent. That fluency promotes comprehension, and comprehension is the key to acquisition has been a widely accepted concept in L2 learning. What then does *fluency* mean and how is it achieved? Fluency, regardless of whether in the four language skills, or in dancing, driving, or playing a musical instrument, usually refers to three components: accuracy, speed, and fluidity (Segalowitz, 2000; Kuhn & Stahl, 2003). In the case of reading, fluency has been widely characterized as "the ability to read text rapidly, smoothly, effortlessly and automatically with little attention to the mechanics of reading such as decoding" (Meyer, 1999, p. 284). Similar characteristics should be applicable to listening, where listeners can reasonably understand aural input delivered at a normal speed. To reach a level of fluency relies largely on constant practice and exposure.

Developing L2 listening fluency is not easy, particularly in L2 contexts. One of the major factors making L2 listening difficult to develop is lack of exposure (Rost, 1994, 2006), more specifically, lack of constant exposure to spoken language delivered at normal speech rates with different accents and language use. There is no clear cut determination on whether the written form is easier than the spoken form or the other way around, as this depends very much on whether the spoken text is planned or spontaneous, formal or informal (see Biber, 1988; Chafe, 1985). However, unlike reading (or the written form), which tends to be more stable, variations in spoken linguistic features may occur from person to person or place to place. In general, listeners face a number of challenges, e.g., connected speech, fast speech rate, accent, transient information, or colloquial usages and slang, which seldom appear in formal L2 textbooks. Leaving these commonly acknowledged difficulties aside, how L2 language teachers can assist their students to develop fluency in listening is an essential task that deserves attention and many scholars have highlighted the importance of

developing fluency in L2 language instruction (Davies, 1982; Grabe, 2004, 2009, 2010; Nation, 2009; Segalowitz & Hulstijn, 2005).

Listening Processes—Theory

In real-life listening, listeners have to process what is heard at a speed determined by the speakers. A normal speech rate in English, regardless of its genre, is approximately three words per second or 150 to 180 words per minute (wpm) (Buck, 2001; Griffiths, 1990; Tauroza & Allison, 1990). Such a speedy pace leaves no room for listeners to stop to think what is being said and means that the listening process must be completely automatic. Buck (2001), based on the work by Schneider and Shiffrin (1977) and Shiffrin and Schneider (1977), distinguished two types of cognitive processes in L2 use: controlled processes and automatic processes. The former refers to activities that require particular attention to control and so the processing is slow, like L2 learners first learning a new word or phrase (also cf. Laberge & Samuels, 1974). The latter involves executing a cognitive activity without attentional control, similar to listeners listening to their native language. For L2 listeners, the more automatic their processing, the better their comprehension.

However, being able to automatically process linguistic elements does not guarantee comprehension. While listening, we need both linguistic knowledge (e.g., phonology, lexis, and syntax) and non-linguistic knowledge (e.g., background knowledge, or contextual knowledge). When a listener's confidence in decoding linguistic input is high, reliance on background or co-text knowledge is low—so-called bottom-up processing. On the contrary, top-down processing is used when a listener's confidence in decoding linguistic input is low and there is a need to seek other sources of knowledge to assist comprehension (Field, 2008). It has to be noted that there is no conclusive findings as to when listeners will use top-down or bottom-up processing; however, it is generally agreed that the two types of knowledge are important and must work interdependently in listening processing.

For L2 listeners, some of the most frequent complaints during listening are about fast speech rates, inability to think fast enough to understand the input, and not being able to match the spoken form with the written form (Chang & Read, 2006). All of these phenomena reflect a lack of listening fluency and further imply that decoding of input is

slow and that comprehension must be therefore only partial or even poor. In reviewing literature on developing L1 reading fluency, many approaches have been found effective in increasing reading fluency, e.g., paced reading, timed reading, repeated reading, oral reading, listening while reading, and extensive reading. With some changes, these methods may be used in developing listening fluency. In this study, reading while listening (RWL) is used for its characteristics (see below) that may be more suitable for learners' whose listening proficiency is still low, and because it can be used outside the class for self-study to increase exposure and to overcome the limited time in formal instruction in the classroom.

The Use of Reading While Listening in L2 Learning

In many L1 reading studies, the term *listening while reading* (LWR) can be found, referring to a practice generally used for developing literacy and reading fluency (Beers, 1998; Rasinski, 1990), in particular for children. Both LWR and RWL involve simultaneous reading and listening; however, the focus, the materials used, and the speed of listening can be somewhat different. In LWR, reading is the goal, so reading is assisted through listening to the oral rendition of *written* texts at a faster speed than in RWL because reading speed is normally faster than speech. However, in RWL, listening is the focus, so *spoken* texts, e.g., conversations, stories, lectures, and movies, are used to assist listening comprehension. This helps language learners, in particular L2 learners, match the spoken form with the written form to develop the skills of auditory discrimination and word recognition (Osada, 2001; Vandergrift, 2007), get used to the spoken rate, rhythm, and the natural flow of the language, and understand how to chunk texts. The aural-written verification of RWL has been found to be particularly beneficial to lower proficiency learners (Mareschal, 2007). In addition to using RWL to assist listening comprehension, Hill (2001) also notes that reading and listening at the same time can be very helpful in enhancing reading speed because it weans learners away from a word-by-word style of reading. Other qualitative benefits include promoting concentration and making aural input more interesting with sound effects (Chang, 2009).

Empirical Evidence of the Effects of Reading While Listening on L2 Learners

In a series of longitudinal studies of ESL elementary pupils, Lightbown, Halter, While, and Horst (2002) and Lightbown and Halter (1989) compared the effectiveness of the comprehension approach (experimental group) versus the audio-lingual approach (regular group) on French learners of English. The former involved reading and listening with a large amount of printed and aural input but without formal teaching; while the latter included regular instruction based on a curriculum and also engaging in a variety of listening and speaking activities (e.g., oral repetition; practicing short dialogues or singing songs). Various measures showed that students in the experimental program performed as well as those in the regular program in comprehension of listening and reading, vocabulary recognition, and other oral tasks. Apart from language gains, students in the experimental group showed very positive attitudes to the type of English class they experienced. Blum, Koskinen, Tennant, Parker, Straub, and Curry (1995) also compared home-based repeated reading of books with home reading and listening to audiotaped books for a period of 19 weeks on five international children who had very limited linguistic knowledge. The study revealed the participants substantially benefited from simultaneous reading and listening to audiotaped books. All of them were able to fluently read increasingly more difficult texts.

Three studies conducted in English as a foreign language (EFL) contexts also show positive findings. Brown, Waring, and Donkaewbua (2008) compared learning vocabulary through three modes; reading, reading while listening (RWL), and listening only (LO), with 35 Japanese college students studying three graded readers. It was found that students learned most words in the RWL mode, followed by reading only and then LO. In addition, students found most comfortable the story presented in the RWL mode, in which more students responded that the story was easy and interesting, they knew most words and understood the story. Similar findings were also reported in Brown's (2007) small scale study, in which 58% of his students preferred reading while listening, 40% reading only, and 2% listening only.

While simultaneous reading and listening was found to be the most successful and comfortable input mode by Japanese students, how much did the students comprehend these stories via the three different input modes? A study conducted by Chang (2009) with Taiwanese college

students sheds some light on this question. Chang compared L2 listeners with RWL versus LO in their comprehension of two short stories of equal level and a length of approximately 1,500 words. Students were given an immediate post-test on story sequence for overall listening comprehension and a gap-filling test to evaluate language gains. The overall results showed that the students achieved 10% more in the RWL mode than with LO. Similar to the report on the Japanese students (Brown et al., 2008, Brown, 2007), the majority of the students perceived that the reading while listening mode made listening tasks easier, the stories more interesting, and they concentrated better. With such a strong and positive effect on L2 listening, Chang suggests the reading while listening mode could be used to develop L2 learners' listening competence in the long-run.

Research Questions

To extend the scope of the studies by Brown et al. (2008) and Chang (2009), the present study explores the development of L2 learners' listening fluency through extensively listening to audiobooks over a period of 26 weeks (or two semesters), from October, 2009 to May, 2010, excluding 6 weeks for winter breaks. Seven students volunteered to receive intervention by RWL to audiobooks. A listening test containing a total of 80 items (40 multiple-choice and 40 dictation) delivered at 160 wpm was administered to a group of 44 students before and after the intervention. A vocabulary levels test was used to examine students' vocabulary gain through RWL. The test outcomes of the seven students were compared to another 12 students of equal level who received no such intervention (the control group). The research questions asked are:

RQ 1: To what extent do the listening scores differ between the RWL and control groups after the intervention?

RQ 2: To what degree do the vocabulary test scores differ between the RWL and control groups after the intervention?

RQ 3: Did students in the RWL group change their input quantity or quality from the first to the second semester? How did their listening test scores and vocabulary gain change in relation to input quantity?

Method

Participants

This study involved 19 Taiwanese students of equivalent level English (based on their placement test scores) chosen from a group of 44 year 10 secondary students who enrolled in a listening course. Their ages were between 15 to 16 and had formally studied English for three years. In the beginning, 12 students took part in the research, however, 4 students dropped out within a week because they considered the intervention very difficult and they preferred the formal instruction. Another female student was sick throughout, and her data was excluded. Therefore, only 7 students received RWL throughout a two-semester period.

Study Materials and Treatment

The RWL group

The study materials for the RWL group were mainly graded readers with audio CDs from Oxford Bookworms, Macmillan, Cambridge, and Scholastic (see Appendix A for the book titles studied). Students were encouraged to study at least one book each week. While the rest of the students were given formal listening teaching, these 7 students were reading books and listening to CDs at the English House, where there were computers for them to play CDs. These 7 students received no quizzes or examinations because every student studied different books, but they had to meet with the researcher once a week to report what they were studying. Each student was provided with study logs for recording the time they spent on reading and listening. The researcher had to constantly remind them that they must listen to the CDs and that listening was their focus for fear they would just read and ignore the aural input.

The Control Group

The rest of the students adopted a formal listening textbook published by Macmillan, with thirty 300–500 word short stories chosen from various resources used as supplementary materials, usually one short story per week. A variety of teaching listening methods were used. For example, one half of the students would read and listen to the first part of the

story while the other half listened to the story only, and then the procedure was reversed as they moved to the second part of the story. When a story was finished, students retold the story using their own words, and a few key words or important vocabulary were deleted from the texts and students had to listen for the missing words. These students received regular quizzes and midterm and final examinations.

Measurements, Scoring and Analysis

Listening Fluency Test

Unlike reading fluency, which can be measured by the number of words read per minute, listening fluency is measured by the comprehension level of aural input that is delivered at a normal speech rate rather than at a unnaturally adjusted slow speed. The higher the comprehension level means the more fluent is the listening process.

A listening test contained 40 multiple choice (MC) items and 40 items of dictation, involving both dialogue and narrative. The speech rate was set at 160 wpm, which is considered to be a normal speed (Buck, 2001, Griffiths, 1990). The MC items required students to listen for the questions and read the four options. The dictation test contained 40 blanks, each of which had one to three missing words. They were read naturalistically at the same speed as the MC questions and the students had to write down what they heard. *There were neither pauses in the whole dialogue nor instructions on punctuation*. While taking the dictation test, students were allowed to listen twice, first for comprehension, second for writing. The test was administered to all the students in the beginning of the 1st semester and at the end of 2nd semester and 26 weeks separated the pre- and post-tests. Students answering one item correctly gained one point, and incomplete answers or misspellings were not counted for the dictation.

Vocabulary Levels Test

Because students studied different books, it was not possible to assess the specific words learned from the study materials. However, most of the books were designed for ESL learners with tight vocabulary control (Hill, 2001), which means that the words in the texts were mostly high

frequency words. So, a vocabulary levels test was suitable to gauge of their high frequency vocabulary gain. A total of 150 items from, 2nd, 3rd, 5th 1000 and academic words (Schmitt, Schmitt, & Clapham, 2001), and the 1st 1000 word[1] were administered to the participants on the same day they took the listening test. Students answering one item correctly gained one point. The orders of the items within the same level were rearranged at the post-test and students were unaware that the test would be repeated.

The main focus of the study was to compare to what degree the two groups differed after the intervention in terms of their listening scores and vocabulary gain. The statistics of 25 lower-level students were excluded because their listening proficiency was not comparable to higher-level students and also because there were no lower-level students who took part in the intervention. Due to the small sample size, the study focused on the descriptive statistics. However, for research question one, *t*-tests were performed to examine whether the two subgroups differed significantly in test results, but it should be noted that the alpha level was adjusted to .15, rather than the traditional .05 level (Stevens, 1996). Cohen's *d* was also calculated to compare the effect sizes of the differences on their listening test scores and vocabulary gain. The books studied by each student in the RWL group were tallied in order to examine how students' listening test scores and vocabulary gain changed in relation to their input quantity.

Procedure

All the participants were given a pre-test on listening (delivered at 160 wpm) and vocabulary levels test in the first week of the first semester. From week 2 to week 15 was the first intervention period. Excluding the mid-term, final examinations, and holidays, there were 13 weeks each semester. In the second semester, the same procedure was repeated except for no pre-test was given in the first week. The total intervention time was 26 weeks.

Results and Discussion

Listening Test

RQ 1: To what extent do the listening scores differ between the RWL and control groups after the intervention?

Table 1 sets out the descriptive statistics for the two subgroups at Time 1 (pre-test) and Time 2 (post-test).

Table 1. The Mean Scores of Two Forms of Listening Test at Times 1 & 2

		Time 1		Time 2	
Group		MC	Dictation	MC	Dictation
RWL (n = 7)	*M*	26.14	12.14	32.71	24.86
	SD	3.48	3.53	3.50	5.11
Control (n = 12)	*M*	26.50	9.33	29.25	16.42
	SD	3.26	4.68	4.39	5.81

Note: the maximum score = 40

As shown, the RWL group and the control group scored nearly the same on MC items at Time 1. Although the RWL group scored a bit higher in the dictation task, the difference was not significant,[2] $t(17) = 1.37$, $p = .19$. At Time 2, the RWL group scored 32.71 on MC questions and 24.86 on dictation, gaining 6.57 and 12.72 respectively. The control group scored 29.25 and 16.42, gaining 2.75 on MC questions and 7.09 on the dictation result. There was no significant difference between the two groups on MC task, $t(17) = 1.78$, $p = .09$, but a statistically significant difference was found for the dictation, $t(17) = 3.53$, $p < .005$. The effect size calculated by Cohen's d was large ($d = 1.54$).

So, the answer to the first research question is that the RWL group outperformed the control group on both tasks, and the difference for the dictation task was statistically significant. That the listening score of the RWL group on the dictation task increased more than 100% shows that RWL must have a large effect on improving listening fluency. It could be that these students became more efficient in word recognition, which increased the speed of the listening process and thus led to a higher level of comprehension. While the RWL method demonstrated a superior effect in improving listening, to say that formal instruction is less

effective than RWL is unfair because the control group received less aural input. The key to the success of the RWL group thus can be attributed to the large quantity of aural input and the support of the written form (the so-called comprehension approach), which made the input more comprehensible. The results corroborate those of Lightbown et al. (2002) and also support Chang's (2009) suggestion that RWL can be used to develop L2 learners' listening competence in the long run.

Vocabulary Gain

RQ 2: To what degree do the vocabulary test scores differ between the RWL and control groups after the intervention?

As shown in Table 2, from Time 1 to Time 2, the RWL group gained 17 marks but only 4 for the control group.

Table 2. Sum of Vocabulary Levels Tests at Times 1 and 2 for the RWL Group and the Control Group

		Time 1	Time 2
RWL	*M*	85	102
(*n* = 7)	*SD*	15	11
	Min–Max	69–113	84–121
Control	*M*	84	88
(*n* = 12)	*SD*	7	8
	Min–Max	67–92	73–96

Note. the maximum score = 150

It is apparent that after the intervention the vocabulary gain between the two groups differs greatly. One word answered correctly in the Vocabulary Levels Tests (VLTs) represents approximately 33.3 individual words, which means that the RWL group probably gained 566 individual words and 123 words for the control group. The answer to the second research question is that the RWL group gained significantly more words than the control group. However, it has to be noted that the number of words gained could be underestimated because the VLT does not contain a 4000 word level, and there is no indication of what words might have been learnt at that level. It is also worth noting that the learners' initial raw scores on the VLT were between 69 and 113. Since

there are 30 tested words at each level, this indicates that the 1st and 2nd 1000 words were well known by all these learners, and the 3rd 1000 level probably was already learned by some students, e.g., students 1, 3, 6, and 7. Quite a large number of the graded readers involved in the study would be written with this vocabulary (cf. Hill, 2001; Nation & Wang, 1999), and so would reduce the opportunities for new vocabulary learning, but would provide very good conditions for listening fluency development. Since students' focus was on developing listening fluency not learning vocabulary, the gain can be considered a by-product of reading while listening. The 566 individual words gained by the RWL group could be said to be a substantial amount.

Changes for Each Student of the RWL Group in Quantity of Books Being Studied, Vocabulary Gain, and Listening Improvement

RQ 3: Did students in the RWL group change their input quantity or quality from the first to the second semester? How did their listening test scores and vocabulary gain change in relation to their input quantity?

In this section, we will first look at the total number of books each student studied, followed by a close examination of each student's vocabulary gain and listening improvement. As shown in Table 3, the total number of books studied by the seven students in the first semester was 86, an average of 12.29 books per student.

Table 3. Total Books Studied by the RWL Group in the 1st and 2nd Semesters

Student #	1st Semester	2nd Semester	Total
1	13	26	39
2	12	16	28
3	11	18	29
4	12	20	32
5	13	25	38
6	13	26	39
7	12	25	37
Total	**86**	**156**	**242**
Mean	**12.29**	**22.29**	**34.57**

Students studied from 11 to 13 books, not every student being able to complete a book per week. However, the quantity of books being studied increased 81% in the second semester. A total of 156 books were studied, and the average was 22.29 books per student. That means that every student was able to study more than one book each week. The quantity ranged from 16 to 26 books. It is apparent that students' listening fluency might have increased substantially. In addition to the quantity, their input quality also improved. In the first semester, some students started with *The Crane Reading Series*, the books of which are very easy and short. Their study logs in the second semester show that students moved to more difficult and longer books. For example, every student listened to the *Jigsaw Jones Mystery Series*, which are not graded audiobooks and are delivered at quite a fast rate.

Now let us turn to vocabulary gain during the two-semester period. From Time 1 to Time 2, the seven students gained from 8 to 22 words after studying 28 to 39 books. Due to each student's unknown words varying, it would be more appropriate to look at the word gain from the total unknown words. As shown in Table 4, the acquisition rates are between 15% and 33%, with an average of 23%.

This rate is comparable to the study by Horst et al. (1998), who had a teacher read aloud the simplified (21,232 words) of the *The Mayor of Casterbridge* to 34 university students during a 14-week reading program. The overall pick-up rate was 22%, 5 out of 23 words.

Table 4. Sum and Gain of Vocabulary measured at Times 1 and 2 for the Students of RWL Group

Student #	Total books studied	Time 1	Time 2	Gain	Percentage*
1	39	88	102	+14	23%
2	28	83	105	+22	33%
3	29	88	105	+17	27%
4	32	79	96	+17	24%
5	38	69	84	+15	19%
6	39	91	100	+9	15%
7	37	113	121	+8	22%

Note: the maximum score = 150

*The gain of the percentage was calculated by [(Time 2 – Time 1) / (150 – Time 1) × 100 (see Horst et al., 1998)

However, the current study did not show that the more one studies the more one gains in vocabulary as a consistent pattern. For example, student #2 studied 28 books, the least of all, but her vocabulary gain was the most, 22 words or 33%; student #6 gained only a total of 9 words after studying 39 books. On the surface, it seems a bit frustrating; but, after the researcher examined student #2's study logs and notes, it was found that student #2 studied very carefully and that most books she chose were from the Macmillan series, which is more difficult than other series.

Two reasons may explain the outcomes. One is that students' original unknown words were different. For example, student #7 scored 113 out of 150 words at Time 1, the highest among the group, leaving only small room for her to gain more. It is likely that this student learned other words that did not appear in the VLT. Another important reason could be that some students put more effort into developing listening fluency instead of learning vocabulary (see student listening scores in Table 5), as this intervention was based on their listening course. This phenomenon will be examined against listening improvement in the following section.

While examining the vocabulary gain by each student above, an unexpected phenomenon was seen—more books studied does not guarantee more vocabulary gain. However, looking at the listening test results, it was found that the seven students improved 4 to 9 points on the MC task. Students #4 and #1 scored lowest at Time 1, but they gained the most, 9 and 8 points respectively. Lower level learners

Table 5. Gain in Listening tests by the RWL Group for MC and DCT tasks

Student #	MC1–MC2	Gain	DCT1–DCT2	Gain	Total Gain (MC + DCT)
1	23–31	+8	7–24	+17	+25
2	25–29	+4	14–21	+7	+11
3	27–34	+7	11–30	+19	+26
4	22–31	+9	10–17	+7	+16
5	25–30	+5	11–26	+15	+20
6	29–35	+6	14–24	+10	+16
7	33–39	+6	18–32	+14	+20

Note. MC1: multiple-choice at Time 1; MC2: multiple-choice at Time 2; DCT1: dictation at Time 1; DCT2: dictation at Time 2; the maximum score = 40

usually make more advancement than higher level ones (Elly, 1991). In the dictation task, 5 students gained between 10 to 19 points, except students #2 and #4, both gaining only 7 points. In the previous section, we have seen that student #2 gained most in her VLT test, but her overall listening improvement was the least. The most likely reason could be that she paid more attention to learning vocabulary than improving her listening fluency, or the books she chose were beyond her level for listening fluently. Overall, one consistent finding for each student in the RWL group is that all 7 students gained, none regressed. And 6 students, except student #4, showed more improvement in doing the dictation task than with the MC task. This was because they scored on an average 26 out of 40 at Time 1, leaving less room for them to make a big gain, as with the dictation task.

Conclusion

From the above discussion and results, findings can be synthesized as:

- Both the RWL and control groups improved their listening test scores to varying degrees, but the RWL group improved significantly more, in particular on the dictation task, implying that the RWL group had greatly increased their speed and accuracy of processing aural input.
- In vocabulary gain, although the RWL group did not focus particularly on learning vocabulary, their general vocabulary increased 17 marks whereas there was an increase of only 4 for the control group.
- Each student in the RWL group showed a large gain in listening and vocabulary from pre- to post-tests. That their listening fluency greatly improved is seen through not only the gain of their listening scores but also the 81% increase in input quantity in the second semester over the first, and that students moved to longer and more difficult texts.

The results summarized above may lead us to conclude that students can improve their listening fluency through reading while listening to a large amount of audiobooks, resulting in an effect superior to those receiving formal instruction with more limited input quantity.

Two important findings are worth emphasizing. The first is that the RWL group increased more than 100% on their dictation scores after the intervention and also significantly outperformed the control group. As Oakeshott-Taylor (1997, cited in Buck, 2001) commented when she analyzed test-takers' errors in dictation tests, dictation requires a variety of linguistic knowledge, such as spelling, phonemic identification, lexical recognition, syntactic analysis, and morphology. The result of the present study seems to support the idea that RWL provides listeners with all of these linguistic inputs and training, in particular by matching the spoken form with the written form and so helping develop the skills of auditory discrimination and word recognition (Osada, 2001; Vandergrift, 2007). In RWL helping listeners develop fast word recognition skills, their listening fluency can be enhanced. Another possibility, as Brown et al (2008) mentioned, is that listeners by simultaneously reading and listening to so many audiobooks, become competent in chunking texts, thus making aural input smoother and more comprehensible. All of these characteristics of RWL may have contributed to the improvement of these students' listening fluency.

A second finding worth repeating is that students' input quantity increased 81% in the second semester, implying that students' interest in these audiobooks also increased. From the researcher's observations, the seven students became very highly-motivated learners in the second semester. They looked forward to meeting the researcher and reporting what they were studying. After the meetings, they were excited about getting new books and CDs, and most students checked out two books every week in the second semester.

Overall, the 7 students' learning outcomes can be considered quite satisfactory. However, one thing that needs to be pointed out concerns "focus." Although this research was based on a listening course with an emphasis on developing listening fluency, some students (e.g., student #2) may have put more attention into reading than listening, resulting in only a small improvement in listening fluency. To facilitate the effects of using the RWL method to improve listening fluency, students may have to be trained to use the method properly. As suggested by Lund (1991), students must end with listening without reading texts.

Although the outcomes for the RWL group were successful, the study involved only 7 secondary students who volunteered to take part in the intervention. Generalization to other populations therefore is not

possible, and more and larger scale studies in this area are called for. In addition, whether these students' reading fluency was enhanced was not investigated by this study. According to Hill (2001) and Iwahori (2008), it is likely that RWL may have facilitated these students' reading speed, but further research is needed to determine this.

Regardless of these limitations, this study provides some scope for future research. There is a large body of literature (cf. Day & Bamford, 1998; Krashen, 2004, for comprehensive review) on the effects of extensive reading and many studies have adopted graded readers as materials. However, most of these studies were limited to reading only, focusing on developing reading fluency and high frequency vocabulary knowledge but not on listening development. One promising area that deserves more attention is whether the listening improvement of these secondary students can be applied to tertiary students. Three recent studies with university students (Brown et al., 2008; Chang, 2009; Horst, Cobb, & Meara, 1998) that include listening to the oral rendition of the texts while reading have shown higher vocabulary learning rates, higher levels of comprehension, as well as high interest in the stories. Together with the present encouraging results, it is strongly suggested that listening to oral rendition of reading texts should be extended to university students to develop their listening competence. Some scholars (Boyle, 1984; Flowerdew & Miller, 1992; Goh, 1999, 2000; Huang, 2004; Zeng, 2007), who investigated tertiary students' English listening comprehension, report that their students have a number of difficulties comprehending English, such as fast speech rates, unfamiliar accents and vocabulary, and long sentences, to name only a few. Learners studying at university through the medium of English rely greatly on good listening skills to comprehend lectures, so developing listening fluency is important for tertiary students. The successful outcomes of this study can be considered as a start, offering another effective learning channel for students who require good listening skills to comprehend lectures delivered in English.

It is a pity that graded readers have been widely used to improve reading competence and vocabulary knowledge without oral rendition of the texts to develop listening fluency. One significant concern could be the cost of purchasing CDs and books. To overcome this difficulty, L2 learners may access websites that provide free online listening resources.[3] These websites provide listening/reading activities with

vocabulary supplements. The topics vary over a wide range, so it is easy for learners to find topics they are interested in listening to, and with speakers from all over the world, listeners can also become used to different varieties of spoken English.

Notes

1. The 1st 1000 words was developed by Professor Paul Nation of Victoria University of Wellington, New Zealand.
2. Due to the small sample size, the alpha was set at a level of .15.
3. Some free websites are: http://www.abc.net.au/btn/archives.html; http://australianetwork.com/learningenglish/; http://www.bbc.co.uk/worldservice/learningenglish/multimedia/ and http://www.ELLO.org.
4. The numbers in parenthesis are the levels of the readers.

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Appendix A

Macmillan Guided Readers

The Stranger; Northanger Abbey; Pride & Prejudice; The Black Cat; The Tales of Horror; The Mark of Zorro; Frankenstein; The Speckled Band and Other Stories; Sense & Sensibility; Dr. Jekyll and Mr. Hyde; The Picture of Dorian Gray; The Woman in Black; The Hound of Baskervilles; The Canterville Ghost; The Great Gatsby; Dracula; The Tales of Two Cities; Goldfinger; Therese Raquin; Emma; A Kiss Before Dying; Rebecca.

Oxford Bookworm Series[4]

The Elephant Man (1); The Little Princess (1); Money or Love (1); One-way ticket (1); The Phantom of the Opera (1); Dead Man's Island (2); New Yorkers—short stories (2); Robinson Crusoe (2); Anne of Green Gables (2); The Call of the Wild (3); Chemical Secret (3); The Death of Karen Silkwood (3).

The Scholastic Readers:

The Omega Files; The Lottery Winner; The Fast Food Nation; Elizabeth—The Golden Age; Dream Girls; Oliver Twist; Mr.Bean's Holiday; Angela's Ashes; Wuthering Heights;
Great Expectations; Jigsaw Jones Mystery Series—The case of the Runaway Dog; The Case of the Detective in Disguise; The Case of the Golden Key; The Case of the Sneaker Sneak; The Case of the Rainy Day Mystery; The Case of the Ghost Writer; The Case of the Race against Time; The Case of the Best Pet Ever; The Case of the Spooky Sleepover; The Case of the Vanishing Painting; The Case of the Stinky Science Project; The Case of the Mummy Mystery.

The Cambridge Readers

Jojo's story; A Picture to Remember; Apollo's Gold; Different World; The Ironing Man; Two Lives; The House by the Sea; The Fruitcake Special and Other Stories; Windows of the Mind; In the Shadow of the Mountain; He Knows Too Much; Dead Cold.

The Crane Reading Series:

The Bird of Happiness (1); The Jewel (1); Fire (1); Clever Animals (1); A Cheap Ride (2); In the Picture (2); Buns for Sale (2); The Magic Coins (2); How Sports Began (2); This Year's Color (3); The References (3); The House on the Hill (3); The shoplifter (3); The Only Explanation (4); Myrtle (4); Only the Truth (4); Ransom (4).