Assisted Reading: A Flexible Approach to L2 Reading Fluency Building

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ABSTRACT

Reading fluency is a critical component of reading proficiency in both the L1 and L2. It lays a foundation on which readers build their reading skills to become strategic and versatile in using a variety of cognitive and metacognitive strategies of reading. In this paper we propose Assisted Reading as a flexible method for developing reading fluency for L2 readers of varying levels of reading proficiency. Complementary to Extensive Reading, Assisted Reading provides L2 readers with powerful scaffolding which empowers them to increasingly read faster and comprehend better. First, we discuss why reading fluency is critical in L2 reading, then provide a brief overview of methods for developing reading fluency in L2, and finally suggest Assisted Reading as a flexible and promising approach for that purpose.

Insufficient Exposure to L2 Print Input

For L1 and L2 readers, it takes a great amount of time and effort to develop fluency in reading, as L2 readers often lack the sufficient reading input needed to develop their fluency (Beglar & Hunt, 2014; Grabe & Stoller, 2011; Nation, 2014). Quoting the biblical phrase “the rich get richer and the poor get poorer,” Stanovich used the term “Mathew Effect” to describe...
a vicious circle in which poor readers without adequate fluency are trapped. Due to their underdeveloped fluency, these readers simply do not read much. This limits opportunities to develop necessary reading skills, potentially preventing them from ever becoming good readers in their lifetime. In contrast, readers with well-developed fluency are willing to read often, which leads to reading skills acquisition and good comprehension. This scenario is often typical of L2 readers as well (Nuttall, 1996).

**Quantity of Reading Input**

To develop reading fluency adequate to sustain efficient reading, L2 reading researchers agree that L2 readers require a great amount of reading input, although the amount necessary may vary slightly among them. Related to general language proficiency, Segalowitz (2003) stated that native speakers of English will have had about 10,000 hours of exposure to input of various forms by the age of 4 or 5. A large quantity of input is considered an essential criterion of achieving the level of fluency expected of native speakers of English. In terms of vocabulary acquisition, Nation (2009) estimated the amount of needed exposure to print recommended to develop native fluency to be 500,000 words per year. He also indicated this rate of exposure should continue for several years (cited in Beglar & Hunt, 2014). Beglar and Hunt (2014), suggested exposure to 200,000 words for L2 readers as a decent and attainable yearly reading goal, based on the findings of their study. These specific suggestions indicate that L2 readers require a great deal of exposure to print to become good readers.

**Ensuring Abundant Reading Exposure**

One major cause of slow reading in L2 learners lies in their underdeveloped word recognition skills (Day & Bamford, 1998; Grabe, 1991; Grabe & Stoller, 2011; Silberstein, 1994). As in L1, automatic word recognition skills are a critical component of fluent reading in L2. Only a substantial exposure to print allows L2 readers to develop such skills. Grabe and Stoller (2011) suggested that there are two obstacles to helping L2 readers develop automatic word recognition skills. The first is that the role of automatic word recognition is not well understood and the second is that it is difficult to provide L2 readers with ample opportunity to develop rapid and automatic recognition skills of vocabulary words. Koda (1994) suggested that a strong correlation between high levels of oral proficiency and better word recognition leads L2 researchers and teachers to think good word recognition skills are a natural product of oral skills development. Even bilinguals with equal listening and reading comprehension, but slightly slower reading rates are less efficient in letter and word identifications in their L2
than L1 (Segalowitz, 1986; Segalowitz, Poulsen, & Komoda, 1991). This finding indicated that even highly proficient L2 readers may lack automaticity in such identification skills.

**Developing Reading Fluency in L2**

Although a number of approaches have been suggested for developing word recognition skills, the most common approach is for L2 readers to read a great amount, allowing automaticity in word recognition skills to naturally develop. Extensive Reading (ER) is an approach in which a wide selection of books are made available to L2 readers. Those books are arranged according to levels of difficulty. The level of difficulty is determined by the vocabulary and the complexity of the grammar structures present in the text. The difficulty level guides readers in choosing books that match their reading proficiency level. Readers are also allowed to choose the books they read based on their preferences. They may stop reading a book if they find it uninteresting and choose another to read (Day & Bamford, 1998).

The alternative approach to ER is a method called Repeated Reading (RR). RR is devised by Samuels (1979) to instantiate Automaticity Theory (LaBerge & Samuels, 1974) into classroom instruction. Automaticity Theory proposes that our attentional resources in working memory are limited to engage in a complex cognitive activities like reading, while lower-level skills like identification of letters, letter clusters, and words should be performed with a minimum amount of our attention. This is due to the fact that readers typically require a considerable amount of attention for comprehension. In his original RR method, Samuels (1979), had young native speakers of English, who were struggling readers, read a series of short passages of the same difficulty level. When they reached a criterion of 100 oral reading per minutes, they moved on to practicing a new passage. In the beginning, it took several trials for them to reach the criterion rate, yet they progressively reduced the number of oral reading trials to reach the criteria. The number of their oral reading errors decreased concomitantly.

In RR, practice effect is the effect of reading the same text repeatedly. Critical to RR, is the impact of practice effect on reading a new unpracticed passage. The progress readers make in RR is reflected in their increasing oral reading rates and the decreasing number of errors they make in pronouncing the words in the text. Through RR treatment, readers consistently increase their reading rate of the same passage, which produces a practice effect that transfers to reading new passages. That is, they begin reading a new passage with a somewhat higher rate than the previous passages. The number of oral reading errors also decreases at each new session. Sometimes the pattern of students’ progress, in terms of their reading rate and the number of reading errors, may not be a steady upward pattern. There may be small increases and decreases. In the long run, however, students consistently and steadily increase their reading rates and decrease the number of errors. The transfer of practice effect is critical for
pedagogical purposes in determining whether we will adopt RR as an efficient method for developing readers’ fluency.

Assisted RR and Non-assisted RR

RR may be applied in two forms: non-assisted RR or assisted RR. In non-assisted RR, students read each passage repeatedly orally (or silently), whereas in assisted RR, the audio version of text is supplied so that readers can read the text while listening to it simultaneously. Samuels’ (1979) original method of RR was non-assisted RR, while Chomsky (1976) and Carbo (1978; 1981) used a recorded reading model in their assisted RR implementations. In past L2 RR studies, Taguchi, Gorsuch, and their colleagues have adopted assisted RR. They assumed that L2 readers are not sufficiently exposed to a spoken mode of the target language and that an auditory model will help them understand the target language. However, recent research found that readers construct phonological representations of the text even in silent reading (e.g., Alexander & Nygaard, 2008; Gross, Millett, Bartek, Bredell, & Winegard, 2013). Although few studies have been conducted on the role of prosodic information in L2 reading, future research may explore a facilitative role prosody plays in L2 reading. Another feature of RR which Taguchi, Gorsuch, and their colleagues have explored is the ideal number of rereading either with or without an auditory model. This interest developed as most of their past studies were conducted within class time and RR could only be a partial component of those classes. Due to the time constraint, a criterion of words per minute (wpm) could not be identified.

Extensive research on RR has been done with monolingual English learners, the majority of whom were young elementary students in the US. The findings demonstrated that RR produced substantial gains in oral reading rates and accuracy represented by the reduced number of reading errors in their oral reading, and in comprehension (for a comprehensive review of RR studies, see National Reading Panel, 2000; Kuhn & Stahl, 2003; Kuhn, Schwanenflugel, & Meisinger, 2010; Therrien, 2004).

RR in English L2 Settings

In English L2 settings several studies have explored the effect of RR (Chang, 2010; Chang & Millett, 2013; Gorsuch & Taguchi, 2008, 2010; Taguchi, 1997; Taguchi & Gorsuch, 2002; Taguchi, Gorsuch, Takayasu-Maass, & Snipp, 2012; Taguchi, Takayasu-Maass, & Gorsuch, 2004). Taguchi, Gorsuch, and their colleagues have used RR in a series of studies in English L2 settings examining silent reading as opposed to oral reading as was used in many
English L1 RR studies. In English L1 settings, students’ dominant reading mode shifts from oral to silent beyond 4th grade (Hiebert, Samuels, & Rasinski, 2014; Juel & Holmes, 1981; Rasinski, Samuels, Hiebert, Petscher, & Feller, 2011). For adult L2 readers who are cognitively mature, silent reading is usually the dominant mode of reading. Taguchi, Gorsuch, and their colleagues used silent reading with university students in their RR treatment. In most of their studies, a recording of a reading model was utilized (Taguchi, 1997; Taguchi & Gorsuch, 2002; Taguchi et al., 2004, 2012), while one study by Gorsuch and Taguchi (2008), implemented for Vietnamese university students, utilized live reading aloud by the first author as an audio model to the students. The findings indicated that overall the participants consistently increased their silent reading rates with only occasional fluctuations in their reading rates. The students’ comprehension also improved (Gorsuch & Taguchi, 2008; Taguchi 1997; Taguchi & Gorsuch, 2002; Taguchi, Gorsuch, Takayasu-Maass, & Snipp, 2012; Taguchi, Takayasu-Maass, & Gorsuch, 2004).

**Some Issues Raised about RR**

As previously stated, RR was originally developed by Samuels (1979) to develop reading fluency of young English monolingual readers. Its effectiveness has also been found in English L2 settings (Chang, 2012; Chang and Millett, 2013; Gorsuch & Taguchi, 2008; Taguchi, 1997; Taguchi & Gorsuch, 2002; Taguchi, Gorsuch, Takayasu-Maass, & Snipp, 2012; Taguchi, Takayasu-Maass, & Gorsuch, 2004). Rereading the same text, however, may have some detrimental effects on readers in some instances. In a diary study with a single subject, “Naomi”, a Japanese stay-at-home mom who had a high English proficiency. Naomi read two novels at the 5th US grader level multiple times (Taguchi et al., 2012). Through the combined data of her reading rates and diary entries, researchers found that RR did help her to progressively read faster and to better understand the text. During the three month treatment of RR, researchers identified that scaffolding, in the form of repetition and the use of auditory model, supported her reading. Both elements of scaffolding enabled her to reflect on her metacognitive reading skills development. Specifically, Naomi tried to determine which part of text she had understood and which part she had not; she also sought to tolerate some ambiguities by making reasonable guesses or just ignoring them. Naomi also consciously sought to retain the vocabulary items in her memory. Rereading the same text provided scaffolding, however, rereading had some undesirable effects for Naomi. Naomi’s comments indicated that RR may lead to reader boredom and demotivation, and that simply rereading the same text does not always ensure better comprehension of the text. Naomi described such an experience below:
June 27---There were some grammatically ambiguous points I couldn’t make out while reading, but I decided not to worry much and keep on reading. Even at the end of the session, however, I still couldn’t understand them. I sometimes found myself losing concentration while reading along with the audio recording. I’m thinking of reducing the number of times I read along with the recording because I felt bored by the 4th or 5th time during today’s session. I’ll make a decision considering my performance in the next session (pp. 44-45).

She found excessive rereading boring and found that she was more susceptible to distraction. In addition, she found that rereading the same text did not always help her understand it better. She raised this issue as many as six times throughout the course of the treatment. Her feedback led to the conclusion that if there are many unfamiliar words in the text and the context does not provide meaningful clues for ambiguity resolution, rereading does not improve reader comprehension. She said:

July 4---No matter how many times I read the same passage, it didn’t help me understand it any better when there were many unfamiliar words. I think I could understand much better if I were able to look up words that were important to understanding the passage (p. 45).

Naomi also commented on some detrimental aspects of the auditory model. The main issue she raised was that the auditory model did not aid in her comprehension of the text unless she was given sufficient time to process the text and prepare to listen to the auditory model. She also stated that with many ambiguities in terms of vocabulary and grammar in the text, reading with an auditory model did not help her comprehension. She said:

August 12---I commented in yesterday’s session that reading became a lot easier after reading along with an audio reading model because of the sound input. This, however, holds true for only those passages that do not contain overly difficult vocabulary and grammar. I felt that reading along with the audio reading model did not help much when reading passages contained unknown words and grammatical ambiguities (p. 46).

The negative features of RR represented in Naomi’s comments are worthy of consideration and may be incorporated as modifications to RR. Assisted Reading (AR), a new approach, has been developed from the theoretical basis of RR with some modification
designed to maximize effect, while maintaining the flexibility to accommodate the needs of learners at various levels of reading proficiency.

**Assisted Reading (AR): Providing Scaffolding in L2 Reading**

RR has been found to be an effective method for developing L2 readers’ fluency and comprehension (Chang, 2012; Chang and Millett, 2013; Gorsuch & Taguchi, 2008; Taguchi, 1997; Taguchi & Gorsuch, 2002, Taguchi et al., 2004, 2012), although more research is needed to investigate why RR works and how RR may best be incorporated in L2 reading education. Assisted Reading (AR) capitalizes on the major tenets of RR while remaining flexible and accounting for the differing needs and preferences of L2 readers. In AR, various forms of scaffolding are provided to L2 readers to maximize L2 readers’ reading. Scaffolding is provided specifically by repetition in reading, the use of an auditory model, and the provision of modest support for L2 readers in terms of vocabulary, grammar, and background knowledge to aid text comprehension. These forms of scaffolding are utilized in a flexible manner to optimally benefit L2 readers.

**Repetition of Text Readings**

The basic principle for deciding the number of readings of a text stipulates that the less developed a reader’s fluency is in terms of reading rate, the more repetition they need. Beginning-level readers with limited fluency should encounter a text between three and five times, including the support of an auditory model. This range of repetition is considered optimal according to the findings of English L1 RR studies (Foster, Ardoin, & Binder, 2013; Blamey, 2008; O’Shea, Sindelar, & O’Shea, 1985). Some adjustments can be made in RR classroom implementation to better attend to the needs and preferences of L2 readers. The number of repetitions, for example, may be set as four including an initial timed reading, two untimed readings along with an auditory model, and then a final timed reading. The first and final timed readings are used to calculate reading gains within the same practiced passages. If learners indicate that they feel four readings in each session are too many, instructors may consider reducing the number of repetitions to three by eliminating one untimed reading. Such an adjustment may keep students motivated and facilitate a smoother implementation of RR.

To date, no studies have investigated the optimal number of rereadings of a text specifically in an L2 setting. The number of rereadings in past studies has varied from five (Gorsuch & Taguchi, 2008; Taguchi & Gorsuch, 2002; Taguchi et al., 2004, 2012), to six (Taguchi et al., 2012), to seven (Taguchi, 1997). In these studies, the total number of readings
varied depending on the number of rereadings required with and without an audio model. For the studies in which the total number of repetitions was five (Gorsuch & Taguchi, 2008; Taguchi & Gorsuch, 2002, Taguchi et al., 2004), there were two readings with an audio model and three timed silent readings without an audio model. In Taguchi et al. (2012), Naomi, the single participant in the diary study, was initially asked to decide the number of rereadings herself during a few initial RR sessions. She elected to read a text six times in total in each session, with three untimed text readings with an audio model and three timed readings (first and last two readings) without an audio model. In the first RR study (Taguchi, 1997), the participants read a text as many as seven times comprised of three untimed readings with an audio model and four (the first and last three) timed readings without an audio model. Prior to the series of RR studies by Taguchi, Gorsuch, and their colleagues, Taguchi (1997) conducted a pilot study to determine the ideal number of readings of a text. Three groups of students were assigned to three different levels of textbooks. The researchers wanted to know how students felt about the difficulty level of the vocabulary and grammar structures used in the textbooks. The number of readings needed to reach the criterion of 180 silent reading words per minute was calculated from the average number of rereadings, and was determined to be three untimed readings (i.e., the second, third, and fourth) with an audio model, and four timed readings (i.e., the first, fifth, sixth, and seventh reading) without an audio model. This totaled seven readings. However, considering that excessive repetition in reading may lead to reader boredom and demotivation (Taguchi et al., 2004; 2012), future research should investigate whether the range of three to five rereadings, considered optimal in English L1 settings, is also effective for L2 readers.

**Utilizing AR to Maximize Scaffolding Effects**

As earlier discussed, Extensive Reading (ER) is the most natural way to read a great amount in the L2, which approximates the way we read in L1. One important contribution of ER is that ER provides L2 readers with a wide selection of reading material on a wide variety of topics (Carrell & Carson, 1997; Davis, 1995; Day & Bamford, 1998; Nuttall, 1996; Renandya & Jacobs, 2002). The books are written with a well-controlled use of vocabulary and grammar structures to match varying levels of L2 readers’ proficiency. There are some contentions raised about ER, which are based on occasional observations of ER implementations. One issue is that readers are often left with a vague idea about the level of comprehension they have achieved. While learners engage in ER they often encounter ambiguities in the text in terms of vocabulary and grammar. Encouraging learners to tolerate ambiguities in the text is one way to ensure L2 readers read a great amount. In ER, L2 readers
are expected to implicitly acquire necessary reading skills and vocabulary, leading to better comprehension as a result (e.g., Ellis, 2003; Hunt & Beglar, 2005; Nation, 2001; Waring, 2006). In contrast, RR may provide L2 readers with a more secure feeling in their reading experience due to multiple exposures to text with an auditory model support. This process allows readers to obtain a firmer grasp on the vocabulary items and grammar structures they encounter in the text. RR, however, is not free from shortcomings. As seen in Naomi’s comments (Taguchi et al, 2012), excessive repetition of reading may bore readers and cause them to lose interest in reading in general. Too much rereading also prevents learners from reading a great amount in wide contexts (Kuhn, Schwanenflugel, & Meisinger, 2010).

In maximizing L2 readers’ development of fluency, the number of readings may be three to five at the beginning of RR implementation. For beginning-level readers with limited fluency, five rereadings may be ideal, yet the number should still accommodate the preferences of L2 readers. The more L2 readers’ fluency grows, the fewer number of repetitions they require. For advanced-level readers with adequate fluency, repetition may not always be necessary. Those readers, however, may benefit from reading along with an auditory model.

Using an auditory model in reading is another form of scaffolding. As suggested in Naomi’s comments, an auditory model paces L2 readers and may help them read a little faster than their natural reading rate. An auditory model, which is rich in prosodic contour, maintains L2 readers’ interest and willingness to read, keeping them motivated throughout the entire reading of a story (Taguchi et al., 2004). What is critical for L2 readers’ development of fluency and other skills is to read in a large amount in wide contexts and on a variety of topics (e.g., Ellis, 2003; Grabe, 2011; Nation, 2014). Rereading the same passages an excessive number of times may be frustrating and demotivating for L2 readers. In addition to these two forms of scaffolding, Taguchi et al. (2012) also found that L2 readers benefit from support for the vocabulary and grammar items as well as some background knowledge to the text. These facilitate L2 readers’ comprehension of text (e.g., characters, cultural, content information, etc.). However, caution should be exercised to provide only the most relevant and appropriate scaffolding support. Information that is excessive and overly detailed will be unhelpful and may confuse readers, even serving to demotivate and inhibit their reading. Scaffolding should be given to L2 readers in a relevant manner and at the most appropriate timing. More specifically, the support should be given so that L2 readers become able to clarify the ambiguities they encountered in the text through multiple exposures. Thus scaffolding help L2 readers better understand the text. AR plays a complementary role to facilitate ER by providing powerful scaffolding in the form of repetition and an auditory model use. This will foster L2 readers’ language and accelerate fluency development.
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