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Does Extensive Reading Promote Reading Speed?

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ABSTRACT

Research has shown a wide range of learning benefits accruing from extensive reading. Not only is there improvement in reading, but also in a wide range of language uses and areas of language knowledge. However, few research studies have examined reading speed. The existing literature on reading speed focused on students' reading speed without attending to students' long-term development in reading speed within extensive reading. The study reported in this article was conducted in Shanghai, mainland China with Year-1 senior high school students. It assessed the development of reading speeds of two groups of readers exposed to two different extensive reading treatments—the free reading treatment and the integration reading treatment. Daily reading records displayed the progress in their reading speed. Results show the positive relationship between extensive reading and students' progress in reading speed.

INTRODUCTION

For many ESL and EFL readers, reading in English is a slow and arduous process (Hamp-Lyons, 1983; Cooper, 1984); yet developing rapid reading, an essential skill for all students, is often neglected in the classroom (Anderson, 1999). In the traditional intensive reading lessons, texts are often vehicles for the presentation, practice, manipulation, and consolidation of language points, rather than the encouragement of reading itself (Nuttall, 1982; Alderson & Urquhart, 1984). Although it should be noted that different purposes require different reading speeds, research has shown the value of fast reading.

The virtuous circle of the weak reader presented in Nuttall (1996) is that the weak readers do not understand what they read because of lack of vocabulary. They do not read much, read slowly, and do not enjoy reading. Nuttall's concept is supported by Stanovich (1986), who points to a phenomenon identified by Merton (1968) as the "Matthew Effect." It suggests that the more students read, the more they increase their reading abilities (cited in Anderson, 1999). Stanovich (1986) pointed out those readers with a limited vocabulary read slowly and less. As a result, they have slower development of vocabulary knowledge, which in turn inhibits further growth in reading ability. Thus, the more exposure a student has to language through reading, the greater the possibilities that their overall language proficiency will improve. By improving reading speed, the students will be exposed to much more language than if they read at a slower, more laborious speed.

Despite the shared concern on the value of fast reading, there is disagreement on the optimal or sufficient reading rate. Some researchers suggested that 180 words per minute

(wpm) "may be a threshold between immature and mature reading and that a speed below this is too slow for efficient comprehension or for the enjoyment of text" (Higgins & Wallace, 1989, p. 392). Dubin and Bycina (1991) stated that "a rate of 200 words per minute would appear to be the absolute minimum in order to read with full comprehension" (p. 198). Jensen (1986) recommended that second language readers seek to "approximate native speaker reading rates and comprehension levels in order to keep up with classmates" (p. 106) and suggests that 300 wpm is the optimal rate. This rate is supported by Nuttall (1996), who stated that "for an L1 speaker of English of about average education and intelligence… the reading rate is about 300 words per minute" (p. 56). Fry (1975) claimed that good readers achieve a speed of 350 wpm, fair readers 250 wpm, and slow readers reach 150 wpm. Encouraged by the research findings in his study, Hill (1981) stated that students who read extensively for professional purposes should aim to cover routine material at speeds between 300 and 600 wpm.

The various optimal reading speeds suggested by the research literature ranges from 180 wpm minute to 600 wpm. Certain individuals have even claimed to be able to read 10,000 wpm over the years. These suggested optimal reading speeds result in two problems. The first problem is that the above-noted optimal reading speeds are suggested for readers of a certain age. We cannot deny that the older the readers are, the more likely they are to read faster. But how fast should ESL and EFL secondary students read on average? For this, Anderson (1999) referenced national averages for optimal silent and oral reading rates by grade level (Hasbrouck & Tindal, 2006, cited in Heidi, 2010).

Silent Reading Rates													
Grade	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	College
WPM	80	115	138	158	173	185	195	204	214	224	237	250	280

This framework reveals the gap between the Chinese EFL learners' reading speed and the proposed standard. As specified in the Chinese English Curriculum Standards, the senior high school students should be able to read at 60 to 80 wpm, and the requirement for college and university students is 100 wpm. However, according to the above standard, the Chinese senior high school and university students cannot even be able to read half as fast as their international peers. It is not a problem caused by the underestimation of students' reading speed, but in fact the Board of Education does not make excessive demands on students' reading in English.

Table 1. Amount of Extracurricular Reading Required in the National English Curriculum Standard

School Stage	Level	Amount of Extracurricular Reading (Word)	
		Net	Accumulative
Primary School	Basic	800,000	800,000
	Advanced	200,000	1,000,000
Junior High School	Basic	1,800,000	2,600,000-2,800,000
	Advanced	200,000	2,800,000-3,000,000
Senior High School	Basic	2,500,000	5,100,000-5,500,000
	Advanced	500,000	5,600,000-6,000,000

As illustrated in Table 1 above, the English Curriculum Standards (Shanghai version) specifies the amount of extracurricular reading. The total reading amount for 12 years is 600,000 words at most, which is equal to 137 words per day. To be precisely at the senior

high school level, a senior high school student in Shanghai is required to read 250,000 running words in three years. A simple calculation will tell us that a student needs to read about 230 words per day if s/he keeps reading every day. If he reads every other day, 500 words each time is enough. Under such circumstances the students will not see any need to read fast. The washback effect of the National Matriculation English Test (NMET) also contributed to the students' low reading speed. From the students' perception of this highest-stakes English test in mainland China, the texts used for assessing reading ability are short (i.e., 300 to 500 words). It is likely for them to equate reading in English to reading short passages, which naturally kept them away from fast reading.

The second problem is that students are hardly able to read materials of different levels of difficulty at the same speed. How fast should they read when the levels of difficulty of the reading materials vary? There is no doubt that they will vary their reading speeds when reading at different levels of difficulty, but we do not know how big the change will be?

The gap between the research literature and reality suggests a number of areas of enquiry for this study. Our first focus is to investigate how fast the Chinese senior high school students can read, especially when the levels of the difficulty of the reading materials vary. The second focus is to gain insight into the effectiveness of extensive reading in developing students' reading speed.

The following areas of enquiries are addressed in this study:

1. How fast can the Senior One students in Chinese mainland read? How fast can they read when the difficulty levels of the reading materials vary?
2. What mode of change in reading speed will the two groups of extensive readers show with extensive reading going on?

METHOD

The researcher implemented a one-year extensive reading program in a public senior high school in Shanghai. Two groups of year-one students (N=66) were exposed to two extensive reading treatments: free reading treatment and integration reading treatment. The books read by the participants in this program were the Oxford Bookworm (OBW) graded readers. One whole set of OBW graded readers was available to each experimental group, namely 235 titles, one copy for each title, for 33 students. The 235 titles were roughly equally distributed to seven levels: 25 at L0, 41 at L1, 47 at L2, 43 at L3, 39 at L4, 21 at L5 and 19 at L6. The OBW grading system is shown in Table 2 below.

Table 2. Grading System of the OBW Graded Readers

Levels	L0	L1	L2	L3	L4	L5	L6
Headwords	250	400	700	1000	1400	1800	2500

Note. L0= Level 0, L1= Level 1, etc.

Before the program began, a placement test was administered to the participants. The Edinburgh Project on Extensive Reading (EPER) offers 5 tests as placement tests within an extensive reading program. Scores are matched against the EPER levels and test performance indicates a student's entry level into the reading program. The EPER Level measures the capacity to read fiction fluently at that level, not the capacity to read that text with the help of dictionary and notebook.

The eight EPER levels are X, A, B, C, D, E, F, and G, with X the highest and G the

lowest. They are designed to measure a complete range of reading levels. Readers who reach Level X are able to read materials written using 3000 headwords. The rest are deduced in the same way. Readers who are at the level lower than Level G are recommended to read starter and reader cards. The results of the placement test showed that 93.54% of the participants were able to read comfortably at the 1600 headword level, which is equal to Level 4 of the OBW graded readers (see Table 3 below).

Table 3. Reading Levels of the Whole Sample as Measure by EPER Placement Test B

EPER Levels		A	B	C	D	E	Total
Headwords		2200	1900	1600	1200	800	
IR	Number	/	5	15	12	1	33
	%	/	15.16	45.46	36.37	3.03	100.00
FR	Number	/	9	13	11	/	33
	%	/	27.28	39.40	3.33	/	100.00

Note. IR=the Integration Reading Group, FR=the Free Reading Group.

The free reading participants (N=33) read out of class, and were encouraged to read as much as they could. There was no strict requirement on how much the free reading participants should read although they were advised to keep borrowing books. The researcher did not require them at which level they should read, either. In short, the free reading participants were free to decide which title to read, and how much to read.

The integration reading participants (N=33) also read out of class, but extensive reading was their daily assignment. The researcher required them to read a certain amount every day. The whole integration reading treatment was divided into four phases, two phases in Semester One and two phases in Semester Two. The first half of Semester One was Phase One, and the second half of Semester One was Phase Two. The first half of Semester Two was Phase Three, and the second half of Semester Two was Phase Four. In the first, second, third, and fourth phase, the integration reading participants read at L1, L2, L3, and L4 respectively. The whole group read at the same level in the same phase. For example, there were 41 titles at L1. On Monday, No.1 student read No. 1 L1 and No 2 student read No. 2. On Tuesday No 1 student read No 2 books and No 2 student read No 3 book. They did not need to approach the book corner and selected their favorite titles; instead, they exchanged their books day by day.

Table 4. Format of Students' Reading Record

No.	Year	Date	Title	Level	Genre	Word Count	Time (m)	Speed (wpm)	Rate	Comments
15	2010	11.28	Grace Darling	3	Classics	10385	90	115.4	4	

Note. 1. m=minutes, wpm=word per minute
2. The students rated the titles on a Likert scale from 1 to 5 with 5 the highest, meaning very satisfactory.

In addition to the book reports required by the researcher, the free and integration reading participants kept their individual reading records. The record included the following information: the number of the books, the date on which the students read the books, the titles, the levels of the titles, the word count of each title, the exact time students spent on each title, the average reading speed calculated by word count/time, and students' rate of the title and

any comments or suggestions on the title (see Table 4 above). To ensure the accuracy of the reading records, the researcher had been keeping her own record of the students' reading according to the book reports.

After the program ended, the researcher printed out the individual reading records and distributed the records to the participants. The participants were asked to first check the printed records with their own reading reports, and second to make revisions on their ratings of titles and add comments and suggestions for individual titles if they wished. With the verification of individual reading records completed and all the errors corrected, the researcher entered the individual reading records into two excel worksheets: reading record of the integration reading group and reading record of the free reading group. The two summarized records provided the following information: numbers of books read by individual students, numbers of books read by the group, numbers of books read by individual students at different levels, numbers of books read by the group at different levels, reading amount of individual student, reading amount of the two groups, frequency of the genres read by the students, preference for different genres by the students, reading speed at different levels of individual students, average reading speed at different levels of the group, and average ratings of a title given by students who had read the title.

Basic Information of Students' Extensive Reading

This one-year project based on extensive reading commenced September, 2010, and ended June, 2011 (one academic year). Throughout this time, the students in the integration reading group read 110.9 books on average, approximately equal to 1,141,248 words per participant. Compared with their integration-reading peers, the participants in the free reading group read much less. According to their individual reading records, they read 853 books in total, 25.8 books per student on average. The average reading amount of the Free Reading Group was 226,732 words, one fifth of that of the Integration Reading Group (see Table 5 below).

The distribution of reading of books at different levels was about equal. The situation of the Integration Reading Group was that in the first half of the first semester they mainly read Level 1 books, and in the second half Level 2 books. In the first half of the second semester they read Level 3 books and the second half Level 4 books. This explains why the distribution of the levels of the Integration Reading Group was approximately equal. During long holidays, such as the National Day and the Dragon Boat Festival, and the winter holiday, the integration reading students who were willing to read books at higher levels were allowed to choose the titles that they were interested in and took the books home because they had more time to read during the holidays. The free reading participants were free to choose what they wanted to read. Interestingly their choices of levels were approximately the same as their integration peers. It confirmed that the reading proficiency of the students in the two experimental groups was about the same.

Table 5. Amount of Participants' Extensive Reading

Group	L0	L1	L2	L3	L4	L5	L6	Total	Reading Amount
IR	/	29.7	29.8	21.3	23.8	6.0	0.3	113.7	1141248
FR	1.3	7.5	7.7	5.5	2.4	0.9	0.6	25.9	226732

Note. L0=Level 0, L1=Level 1, etc.

The verification of the participants' individual reading record showed that the number of books read and word count of individual participants varied. In the Integration Reading

Group, the student who read most finished reading 141 books or 1,297,610 words, while the one who read least read 78 books or 919,398 words.

The difference happened in the Integration Reading Group, who read approximately equal amount per day as the researcher required. It was necessary to identify how the difference emerged. The explanation was that some capable readers in the Integration Reading Group requested to read books at higher levels than the assigned ones. For instance, if the whole group were reading at L2, they asked to read at L3 as some of them would be willing to read at their *i*+1 level or some of them considered that L2 was much too easy for them. Thus, the absolute number of books was indicative of how many books a student had actually read, but it did not mean that the actual number of running words of 78 books was less that that of 141 books. The word count of an OBW L1 varies from 5,000 to 7,000, while that of an OBW L6 is between 25,000 and 35,000. The actual reading amount may vary enormously among readers, and in the long term, the gap could grow significantly. Compared with the integration reading group, the situation in the free reading group was less diversified within the group. The book numbers showed that there was no obvious difference of book numbers among the group members, while the actual reading amount ranged from 161,980 to 416,634, a gap of 250,000 words (see Table 6 below).

Table 6. Quantification of Students' Extensive Reading

Group	Item	N	Minimum	Maximum	Mean	SD
IR	Number of Books	33.00	78.00	141.00	113.70	12.23
	Word Count	33.00	919398.00	1297610.00	1141248.21	76523.13
FR	Number of Books	33.00	23.00	28.00	25.85	1.46
	Word Count	33.00	161980.00	416634.00	226731.97	60409.28

Although the above explanation accounted for the different book numbers, there was indeed a gap between the actual reading amounts. To examine whether there was a difference between the actual reading amounts within the same group, the individual reading amount was subject to the One-Sample T-test. As shown in Table 7, the One-Sample T-test revealed that although there were differences between participants' actual reading amounts, the difference was not statistically significant (t=.000, df=32, sig=1.00).

Table 7. Reexamination of Students' Reading Amount

One-Sample Test				
Group	Test Value	t	df	Sig. (2-tailed)
IR	1141248	.000	32	1.00
FR	226732	.000	32	1.00

Before beginning to analyze the findings, we have confirmed that there were no statistically significant differences of the actual reading amount among the students within the same group, that is, all participants in the integration reading group and the free reading group had read approximately the same within their respective groups. Thus, the findings were attributed to the two extensive reading treatments. It was not because of the different reading amounts among students that the treatments produced different results.

FINDINGS AND DISCUSSION

To illustrate the change in students' reading speed, the researcher recorded the participants' reading speeds for the first L1 book and the last L1 book, the reading speeds for the first L2 and the last L2 book, the reading speed for the first L3 and the last L3 book, and the reading speed for the first L4 and the last L4 book. The data presented in Table 7 below present the averages of the reading speeds of the 33 participants in each group. Not all the students had ever read the L5 and L6 books and, therefore, such data are not presented here, as our purpose of discussion was to detect something in common shared by the readers (see Table 8 below).

Table 8. Reading Speeds at Different Levels of the Two Experimental Groups

Group	L1-F	L1-L	L2-F	L2-L	L3-F	L3-L	L4-F	L4-L
IR	139.89	183.12	134.59	191.48	159.97	190.13	178.58	230.66
FR	145.13	145.83	139.52	175.39	167.46	173.87	205.42	212.18

Note. L1-F=the first Level 1 book, L1-L=the last Level 1 book, etc.

According to the standards proposed by Hasbrouck and Tindal (2006) noted above, the Chinese EFL students read rather slow. The suggested optimal reading speed for the 10th grader is 224 wpm. However, when the program began, the average reading speed of the integration and free reading group was 139.89 wpm and 145.14 wpm respectively, less than 65% of the international standard. Given that the average speed was based on the fact that the participants read at L1, namely the 400 headword level, at which they read without any difficulty, the situation seemed more unpromising. When the integration group moved to L2, their average reading speed reached 183.12/wpm, an approximately 30% increase. In comparison, the average reading speed of the free reading participant remained stable. After reading seven L1 books on average, there was no obvious progress in their reading speed.

When moving to L2, both the integration and free reading groups showed retrogression. The integration reading groups stepped backward from 183.12 wpm to 134.59 wpm, and the free reading group from 145.83 wpm to 139.52 wpm. The two groups read slower than their beginning reading speed when the program began. This suggest that the difficulty level of reading materials did have an impact on reading speed. Simultaneously, the impact did not last long. When the participants moved to L3, both groups reached a new peak: 191.48 wpm for the integration reading group and 175.39 wpm for the free reading group. In the rest of the program, the same situation repeated each time the participants moved from a lower level to a higher level: there was always retrogression, followed by a new peak when the participants finished one level. We have reason to believe that the varying levels of difficulty of the reading materials did impact the reading speed, but the impact was temporary as the participants regained their reading speed once they became accustomed to the new difficulty level. In addition, they made progress in their reading speed as they kept on reading.

At the end of the program, the integration reading participants were able to read at 230.66 wpm, faster than the suggested 224 wpm. The free reading participant, although slower than their integration reading peers, could manage 212.18 wpm, slightly slower than the proposed standard. In the whole program, the integration reading participants showed a 64.8% increase in their reading speed, from 139.89 wpm to 230.66 wpm. The free reading participants moved from 145.13 wpm to 212.18 wpm, a 46.2% increase. It is worth noting here that this increase was based on their move from L1 to L4, that is, from the 400 headword level to the 1400 headword level. It is, therefore, reasonable to assume that the increase in their reading speed is greater than the simple calculation shows. Conservatively estimated,

the increase in the integration reading group's reading speed should be around 70% to 100%, and the estimation for the free reading group should be around 50% to 80%.

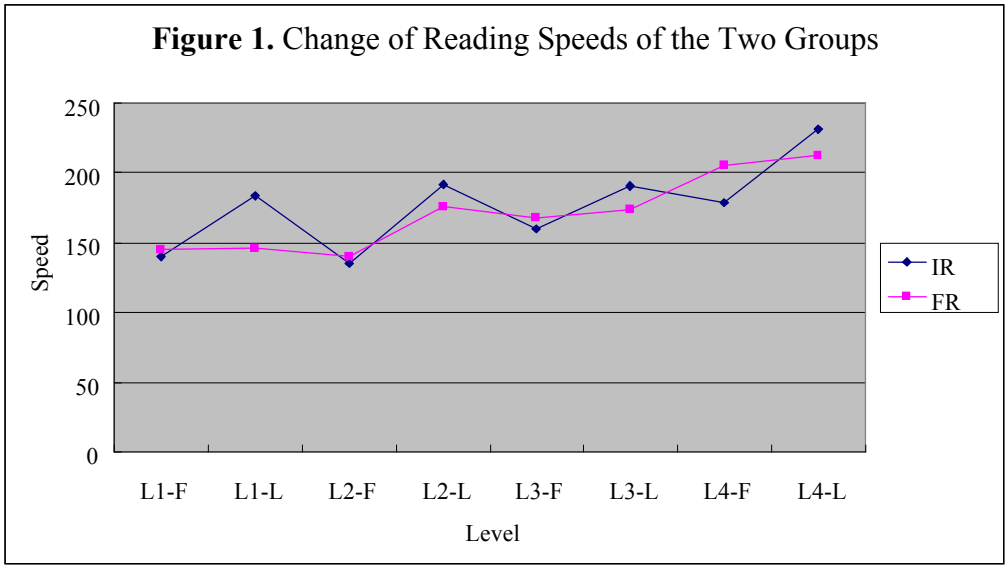
A further calculation showed where and when the biggest progress happened. As shown in Table 9, the integration reading group experienced rapid growth in their reading speed. The increase within the same level ranged from 18.85% to 42.27%, and the total increase rate in the whole program was 64.89%. In comparison, the biggest progress of the free reading group appeared when the free reading group finished reading L2.

Table 9. Reading Speeds at Different Levels of the Two Experimental Groups

Group	L1-F	L1-L	%	L2-F	L2-L	%	L3-F	L3-L	%	L4-F	L4-L	%	Total
IR	139.89	183.12	30.90	134.59	191.48	42.27	159.97	190.13	18.85	178.58	230.66	29.16	64.89
FR	145.13	145.83	0.004	139.52	175.39	25.71	167.46	173.87	3.83	205.42	212.18	3.29	46.20

Figure 1 illustrates the finding that the modes of the two groups' progress in reading speed were indeed different. Throughout the whole program, the free reading group maintained their regular reading speed and made steady and gradual progress as they moved upward. There was no obvious retrogress when the free reading participants moved from a lower level to a higher level. Compared with the trend of the integration reading participants, the curve of the integration reading participants twisted and turned heavily. Within each level, the integration reading participants made notable progress; however, there must be retrogress in reading speed when they attain a higher level.

Figure 1. Change of Reading Speeds of the Two Groups



The different trends of the two groups shown by the curves support the following conclusions. First of all, the integration reading participants were not able to choose what they felt like reading; instead, the individual students in the integration reading group had to keep up with the pace of the whole group. They improved their reading speed at a certain level because of the huge reading amount; however, when requested to move to a higher level, not all the participants were well prepared for the move. This explains why without exception there was obvious retrogress when the integration reading group began a new level. In contrast, the free reading participants were able to manage their own reading. They decided what and how much they read. The individual reading records showed that the free reading participants did not follow the levels strictly; instead, their choice of books was largely because of their preference over a certain genre (e.g., crime and mystery, thriller and

adventure, etc.). A reasonable explanation was that the free reading participants had a clear perception of the difficulty levels of the OBW graded readers so they adjusted their reading speed, skills, and strategies to accommodate the change. It must be pointed out that 250 headword, 400 headword, 700 headword, 1000 headword, and 1400 headword required different decoding efforts although the pre-test showed that the 1400 headword was well within the participants' reading competence. Because of their proper management of their reading, the free reading participants made steady increase by 46.20%, although their progress between levels was less noticeable than that of their integration reading peers.

CONCLUSION

We note a gradual increase in students' reading speed, at both the individual level and the whole. The integration reading students began the program with a speed at 139.89 wpm for Level 1 books on average and ended at a speed at 230.66 wpm for Level 4 books. The free reading students began the program with a speed at 145.13 wpm for Level 1 books on average and ended at a speed at 212.18 wpm for Level 4 books. On individual levels, students in both groups read the last book faster than the first book at the same level. The integration participants made bigger progress in this aspect, since their increase in reading speed on individual levels was bigger than that of the free reading group. This finding could be attributed to their huge reading quantity and daily practice.

In addition to the progress at individual levels, students in both groups made remarkable progress as extensive readers. Judging from the absolute number, the average reading speed of the students in the integration reading group increased by about 60%, from 140 wpm to 230 wpm. The increase for the free reading group was around 45%, from 145 wpm to 212 wpm. Furthermore, it is worth noting that the OBW L1 is at the 400 headword level while the OBW L4 is at the 1400 headword level. Taking the increasing levels of difficulty of reading materials into account, students' progress in reading speed was much greater than what the absolute numbers had actually shown.

Despite the progress, the two groups showed different modes of progress mainly because of the treatments. The pedagogical implication drawn from the difference was that extensive reading was effective in improving readers' reading speed but it is advisable not to take the effectiveness for granted. The curves of the two groups showed that a large reading amount would lead to improvement in reading speed, but the readers' self-preparation and self-adjustment would promise a more smooth transfer from a lower level to a higher level.

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