

The Effect of a Speed Reading Course

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Reading fluently is an important goal for learners of English. One way of developing reading fluency is to do a speed reading course. For learners of English, such a course needs to be within a controlled vocabulary so that learners do not face lexical difficulties which may interrupt their reading. This study reports on the results of such a course lasting nine weeks. Analysis of the students' speed readings on graphs showed that (1) using a variety of ways of calculating the increase in speed, almost all learners increased their reading speed, some very substantially, (2) most of the increase occurred in the first ten texts but there are still gains to be made by reading at least twenty texts, and (3) most learners made a gradual increase in speed rather than making sudden jumps or staying on plateaus for a while before making an increase. When spending the small amount of time on running such a course, there is a very good return for practicing speed reading with learners of English as a foreign language.

1. INTRODUCTION

"Speed, enjoyment and comprehension are closely linked with one another, and with the amount of practice a reader gets. Any of these factors can provide the key to get us out of the vicious circle (reads slowly, doesn't enjoy reading, doesn't read much, and doesn't understand) and into the virtuous one (reads faster, reads more, understands better, and enjoys reading)" (Nuttall, 1996, pp. 127-128).

Reading fast is considered an important goal of reading instruction. Some students read word by word, and thus comprehend poorly. While reading, three types of action occur: fixations on certain words, jumps to the next word, and moves backward to a word already read. Learners who read slowly are typically (1) fixating frequently, (2) spending a long

time on each fixation, and (3) looking back frequently at what they have already read (Nation, 2005). Speed reading practice can be a way of overcoming these obstacles to reading fluency.

Many students go abroad to study at university which requires an enormous amount of reading because writing essays and papers is mainly based on what is read. To cope with this, speed reading is a very useful preparation for successful study.

Teachers are often asked how to improve listening proficiency and reading proficiency in order to obtain good scores in TOEFL. One of the difficulties students have in listening is that they easily lose track while working out what they have heard. In reading comprehension in TOEFL, students are always short of time to answer all the comprehension questions given. This is because when trying to understand both listening and reading, students have a habit of translating English into their first language. Speed reading can help with moving away from dependence on translation.

II. WAYS TO IMPROVE READING SPEED

Research on eye movements and fixations while reading suggests that the upper limit of normal fast reading is around 300 words per minute. This speed still allows most words to be fixated on, and is a reasonable goal for learners to improve their reading speed (Nation, 2005).

There are several ways to improve reading speed: repeated reading, easy extensive reading, and carefully organised speed reading courses.

Repeated reading has been found to help learners develop reading fluency. Learners read the same text over and over again, and get better at doing it like musicians practising a piece. Repeated reading and repeated reading while listening to a taped passage have been shown to be effective in improving reading speed in first language learners (Dowhower, 1989; Nation, 2005; Rasinski, 1990; Samuels, 1979).

Easy extensive reading is also an effective way of increasing reading speed (Shin and Ahn, 2006). Learners read graded readers (easy books with several levels) within their proficiency level. Because graded readers work within a controlled vocabulary and set of structures, learners meet the same words and grammatical structures many times. Quite large quantities of such reading are required to increase reading speed. One of the very useful activities conducive to the development of reading fluency is to encourage learners to read lots of graded readers at the same level (Nation, 1990, 2001, 2005; Nation and Wang, 1999).

Another very efficient way of increasing reading speed is to take a well-organised speed reading course which involves timed readings of different passages with controlled length

and vocabulary. Such courses include comprehension questions following each passage, and speed reading and comprehension graphs providing visible proof of progress (Nation, 2005; Quinn & Nation, 1974). Learners should read about three short texts per week for several weeks.

Researchers have already investigated repeated reading and extensive reading as a technique for improving reading speed. Previous research into speed reading investigated whether reading speed in the first language was transferred to reading speed in English (Bismoko & Nation, 1974; Craner, 1975). These two research papers however have a methodological flaw in scoring the amount of increase in reading speed. There are no recent reports of how a speed reading course has worked with a group of EFL learners.

In this article, we will answer the following questions:

1. How can we determine the amount of change in speed reading?
2. Where does most of the increase occur if you read more than ten texts, in the first ten or second ten of the twenty texts?
3. What are the patterns of progress in speed?

The goal of the article is to show the value of speed reading courses in promoting reading fluency in EFL contexts and to alert teachers to what to look for when running and evaluating their own course.

III. METHOD

1. Participants

This study was conducted with 49 university students who were taking a Listening Comprehension English class which met twice a week for 50 minutes each time. Almost all were first-year students at a university in Jochiwon, Korea. Twenty-six out of the 49 students were males and twenty-three were females. Before starting the speed reading course, students took a vocabulary test on words in the texts to see whether they had enough English proficiency to attend a speed reading course. Seven students who scored below twenty-five out of thirty, were given the 1000-word list to study at home, and then tested again. In the second test, all of the seven got a score of more than twenty-five. To practice speed reading using the book, *Speed Reading* (Quinn & Nation, 1974) students should have vocabulary knowledge of at least the most frequent 1000 words.

2. Procedures

The texts in the book, *Speed Reading* (Quinn & Nation, 1974), were the basis for the course and were used to obtain the speed reading data. This book has been designed for practising speed reading within the first 1000 words of English for non-native speakers of English (West, 1953). It consists of 25 texts (each exactly 550 words long), with ten multiple-choice questions following each text (see Appendix A for an example of the texts), the 1000 vocabulary level test, the word list, reading speed and comprehension score charts, and an answer key for the comprehension questions. The text is available from studentnotes@vicbooks.com.au. One book can be cut up to provide enough texts for a class of around twenty students.

Students read twenty-three texts for a total of nine weeks (from 21 March 2005 to 10 June 2005). For the first five weeks, students read two texts each week in class time, for the next three weeks, three texts each week (two in class time and one as homework), and for the last week, four texts (two in class time and two as a homework). The first 20 of the 23 texts were used to score the amount of increase occurring in the course. Usually twenty or more texts are read for a speed reading course (Quinn & Nation, 1974).

For this study, forty students' charts (see Appendix B) were collected. At the beginning of the course, 49 students volunteered, and at the end of the course, forty-two students handed in their speed reading charts; two of them who read only sixteen texts were not included in this study.

Students measured the reading time as the teacher instructed in class (see Quinn & Nation for details of instruction). When the whole class was ready to practise speed reading together, the teacher said "start", and the students began reading as fast as they could. As students finished the reading, they made a note of their reading time. Then they answered the questions from memory without looking back at the passage, and marked them using the answer key. Finally they converted their time into words per minute using the conversion chart given (see Appendix C), and put their speed in words per minute and their comprehension scores on a graph.

When measuring the speed increase for this study, it was found that 25 out of the 40 students did not write the raw score of the speed on the graph, and the remaining 15 students did. This is because it was thought at the time of starting the course that exact speed scores were not necessary when looking at the patterns of progress in speed, and so students were not asked to write the exact speed. In future studies it is worth doing this. When converting the graph into raw scores per minute, a conservative estimate of the raw score was used in order to avoid exaggerating the amount of increase in speed. In other words, when converting the reading times, 2 minutes 20 seconds, 2 minutes 30 seconds and 2 minutes 40 seconds into words per minute, the reading speeds were 236 words per

minute, 220 words and 206 words respectively. However it was not easy to tell the exact speed on the graph without having the exact speed scores. In this case, the lowest score 206 was chosen to measure the speed increase.

IV. RESULTS

1. How Can We Determine the Amount of Change in Speed Reading?

At present, there is no reliable report about how to measure the rate of increase in speed reading. For this study, the authors designed a number of ways of scoring the rate of increase in speed reading. Firstly, we scored the increase between the average of the first three and the average of the last three texts (hereafter, the average scoring method). Secondly, we scored the increase between the highest and the lowest score (hereafter, the highest minus lowest scoring method). The third method was to score the increase between the first and the twentieth text (hereafter, the 20th minus 1st scoring method).

1) Average Scoring Method

The average scoring method was calculated by taking the average of the scores on the last three texts (18, 19, 20) minus the average of the scores on the first three texts (1, 2, 3). For example, student #36 had a speed of 97 words per minute on the first text he read, 110 on the second text, and 97 on the third text (see Appendix D for all scores). The average of the three speed scores is 101 words per minute. Taking the average of the first and last three scores makes sure that the speed is not exaggerated or lowered by an unusual first and last score. It tends to raise the starting score compared to just taking the score on the first text. This is a conservative scoring method (see Table 4). Table 1 shows the amount of increase obtained by the average scoring method.

TABLE 1
The Average Scoring Method Ordered by Percentage of the Total Increase

Students	Average of the first three scores	Average of the last three scores	Total increase	% of the total increase
36	101	348	247	244
23	121	320	199	164
22	133	332	199	149
18	137	295	157	115
13	136	276	140	103
39	142	263	121	85
1	142	261	119	84

35	120	218	98	82
14	133	238	105	79
8	116	198	82	71
15	224	367	143	64
7	160	262	102	63
2	169	268	99	59
16	158	250	92	58
25	123	191	68	55
11	122	189	67	55
9	147	221	73	50
24	121	181	60	49
17	114	165	52	45
37	123	175	52	43
27	107	150	43	40
31	106	146	40	38
38	147	202	55	38
10	155	211	56	36
21	189	257	67	36
6	146	192	46	31
28	121	157	36	30
26	140	181	40	29
33	155	199	44	29
40	168	216	48	29
19	134	167	32	24
32	114	135	21	18
4	122	142	20	16
12	184	211	27	15
30	198	227	29	15
3	159	177	18	11
20	157	171	14	9
34	188	191	3	2
5	102	99	-3	-3
29	110	96	-14	-13
Average	141	214	73	52

The data in Table 1 is ranked according to the column of the percentage of total increase. Student #36 made the biggest percentage increase. His average score on the first three texts was 101 words per minute. His average score on texts 18 to 20 was 348 words per minute, an increase of 247 words per minute or a 244% increase on his initial average score (247 divided by 101 expressed as a percentage). The average of the 40 students for the first three texts was 141 words per minute, and the average for the last three texts was 214, an increase of 73 words per minute or a 52% increase.

Thirty-eight (95%) out of forty students increased their speed; five out of the thirty-eight students more than doubled their speed. Only two students did not make any progress at all although their initial scores were lower than the average of the 40 students. Their reading

speed graphs are almost flat.

For most of the scores in Table 1, when the increase in raw score goes up, percentage of the increase goes up too. However, Table 1 above shows that there are a few exceptions in which increases in the raw score do not match percentage increases. For example, the amount of the total increase is the same (67) for students 11 and 21, but student #11 achieved a greater increase (55%) than the 36% of student #21. This is because student #11 started at 122 words per minute, lower than the 189 of student #21.

2) Highest Minus Lowest Scoring Method

The highest minus lowest scoring method finds the amount of increase by taking the highest speed reached, minus the lowest even though the lowest and highest may not be near the beginning or end of the course. For example, student #19's highest speed was reached on the sixth text (330 words per minute). Her lowest speed was reached on the third text (103 words per minute). There were nine students who had the extreme of highest or lowest on between the sixth and the fifteenth texts, but for the remaining thirty-one students the highest scores were on one of the last five texts and the lowest scores were on the one of the first five texts. This method of scoring may exaggerate gains. It does however show what could be done. This method could also be called the "extremes" scoring method because its calculation is based on the two extreme (highest and lowest) scores.

TABLE 2
The Highest Minus Lowest Scoring Method Ordered by Percentage of the Total Increase

Students	Lowest score	Highest score	Total increase	% of the total increase
18	103	471	368	357
36	97	414	317	327
22	100	367	267	267
1	103	330	227	220
19	103	330	227	220
39	94	300	206	220
14	103	300	197	219
23	118	330	212	191
16	106	275	169	180
2	127	300	173	159
13	127	300	173	136
35	110	254	144	136
7	7	275	153	131
11	106	236	130	125
21	127	275	148	123
20	103	220	117	117

10	122	254	132	108
15	183	367	184	101
9	118	236	118	100
24	97	194	97	100
37	97	194	97	100
38	110	220	110	100
40	127	254	127	100
8	106	206	100	94
27	94	174	80	85
3	138	254	116	84
25	114	206	92	81
17	97	174	77	79
17	97	174	77	79
34	122	206	84	69
12	165	275	110	67
28	97	157	60	62
32	97	157	60	62
31	97	150	53	55
26	127	194	67	53
6	138	206	68	49
33	150	220	70	47
4	103	150	47	46
5	97	138	41	42
30	194	236	42	22
29	94	110	16	17
Average	116	248	132	114

Table 2 shows that student #36's lowest score was 97, and his highest score was 414, an increase of 317 words per minute or a 327% increase which is much bigger than the 243% in the average scoring method. The average of 40 students for the lowest speed was 116 words per minute, and the average for the highest was 248, a total increase of 132 words per minute or a 114% increase which is more than double the 52% increase in the average scoring method. The reason was that the highest minus lowest scoring method used the extreme values.

Using the highest minus lowest scoring method, all students increased their speed. Over half (23) of the students doubled their speed, which is many more than the five students in the average scoring method.

If we compare Table 2 and Table 1 (the average scoring method), we can see that in Table 2 all the scores are positive, meaning everyone made an increase in speed, and all the gain scores are higher both in words per minute and percentage terms.

3) 20th Minus 1st Scoring Method

The 20th minus 1st scoring method simply takes the student's score on the first text away

from the score on the twentieth text. This assumes that the beginning will be low and that the increase will be apparent with the final score. This is not always true. For example, student #29's speed on the first text was 110 words per minute, but his speed on the twentieth text was 94 words per minute.

TABLE 3
The 20th Minus 1st Scoring Method Ordered by Percentage of the Total Increase

Students	First score	Last score	Total increase	% of the total increase
36	97	330	233	240
22	100	330	230	230
18	103	330	227	220
23	127	330	203	160
39	94	236	142	151
1	103	254	151	147
14	103	254	151	147
16	106	254	148	140
13	127	300	173	136
7	122	275	153	125
11	106	236	130	123
35	122	254	132	108
15	183	367	184	101
2	127	254	127	100
24	97	194	97	100
40	127	254	127	100
8	106	206	100	94
38	110	206	96	87
37	97	174	77	79
9	97	174	77	79
27	118	206	88	75
17	100	174	74	74
10	122	165	68	70
28	97	157	60	62
32	21	275	101	58
32	97	150	53	55
26	127	194	67	53
31	97	144	47	48
20	103	150	47	46
25	127	183	56	44
19	150	206	56	37
12	165	220	55	33
4	103	132	29	28
3	138	174	36	26
33	157	194	37	24
6	144	165	21	15
30	194	220	26	13

34	183	206	23	13
5	97	100	3	3
29	110	94	-16	-15
Average	121	219	97	80

According to Table 3, student #36 read at 97 words per minute on the first text, and 330 words on the twentieth text, a total increase of 233 words or a 240% increase. The 240% increase is a little bit lower than the 243% in the average scoring method even though his first score is a little bit lower than the 101 in the average scoring method. It means that his speed had ups and downs, so the average of his last three scores was greater than the 330 words per minute on the twentieth text.

The average of the 40 students on the first text was 121 words per minute, and the average on the twentieth text was 219 words, a total increase of 97 words or a 80% increase, higher than the 52% in the average scoring method.

39 out of 40 students achieved a speed increase when calculating by this method, and 16 of the 39 students doubled their speed which is a larger number than the five students in the average scoring method, but smaller than the 23 students in the highest minus lowest scoring method. Only one student however did not achieve any increase at all. His first score was 110 words per minute which is lower than the average (121) of the forty students, and his twentieth score was 94 words which is far lower than the average (219) of the forty students. In fact, this student's speed decreased. We can guess that his English proficiency was not good enough to follow the speed reading course, his motivation was low, or the course did not engage him.

Now let us compare the figures shown in the three scoring methods.

TABLE 4

Comparison of the Average Values for All Students in the Three Methods

	Average of forty students for the lowest scores or the lowest method	Average of forty students for the highest scores or the highest method	Total increase	Percentage of the increase
Average scoring method	141	214	73	52
20 th minus 1 st scoring method	121	219	97	80
Highest minus lowest scoring method	116	248	132	114

As can be seen in Table 4, the averages for the first and the last scores in the highest minus lowest scoring method are the extremes of highest (248) and lowest (116), giving dramatic gains (132 words per minute or a 114% increase). The values in the 20th minus 1st

scoring method are halfway in between the average scoring method and the extremes scoring method. The increase of 73 words or 52% in the average scoring method is far less than those (132, 114% and 97, 80%) in the other two methods. The average scoring method is clearly the most conservative.

In sum, out of the three scoring methods, the average scoring method seems the safest to use for determining overall change in reading speed for several reasons.

First, in general, reading speed goes up and down. Thus choosing average scores enables us to avoid choosing the extremes of high and low, and avoid choosing an unrepresentative initial and final score as representative ones.

Second, the starting scores of the students vary from 94 to 194. As the starting score determines the percentage of the increase, it is important at least to have a representative stable beginning score. Using an average does this. Table 5 looks at the difference between the average starting score on the first three texts and the score on the first text for all forty students. This is done to see if just choosing the score on the first text would misrepresent the learners' speed at the beginning of the course. Positive figures in the first column mean the average starting score is higher than the first score, and negative figures mean the average starting score is lower than the first score.

TABLE 5
Levels of Difference in Words per Minute Between the Average Starting Score and the First Score, and Number of Students for Each Level

Difference	Number of students
51-60	2
41-50	4
31-40	6
21-30	6
11-20	7
1-10	9
0	1
-10~-1	4
-20~-11	1

As shown in Table 5, only one student had a score on the first text which was the same as the average starting score. The remaining thirty nine students had different scores for the first text and the average of the first three texts; a large number (34) of the students had higher starting scores on the average of the first three texts. Using the average score generally results in a starting score that is higher than just taking the score on the first text. Taking the average thus has the effect of reducing the percentage increase for the course. When students begin a speed reading course, they may be uncertain about what to do, and thus the score on the first

text may not be representative of their real reading speed at that point.

Third, the average scoring method is the most conservative among the three scoring methods, because unusually high or low scores become part of an average, and because the average starting score is usually higher than the first score. Therefore it is possible to avoid exaggerating the increase.

2. Where Does Most of the Increase Occur If You Read More Than Ten Texts, In the First Ten or Second Ten of the Twenty Texts?

The answer to this question tries to see whether most of the increase from a speed reading course is achieved early in the course. If it is, continuing the course might not be a productive use of class time. If however students continue to improve, then it is worth continuing the course.

In order to answer this question, we have to find what percentage of the total increase occurs in the first ten texts. The 20th minus 1st scoring method is used because (1) we have to divide the 20 texts used for a speed reading course into two parts: the first ten texts and the second ten texts, (2) averaging the first three and last three of each ten leaves only a few texts not included in the average calculations, and (3) the extremes of highest and lowest are not always at the beginning or the end of the course.

The calculation was done by (1) taking the first text score away from the tenth text score (i.e., the 10th score minus the 1st score, see the second column in Table 6), (2) taking the tenth text score away from the twentieth text score (i.e., the 20th score minus the 10th score, see the third column) and (3) taking the first text score away from the twentieth text score (i.e., the 20th score minus the 1st score, see the fourth column). Then (4) the increase in the 1st ten texts was divided by the overall increase (i.e., the increase in the 1st ten texts/the total increase, see the fifth column).

If more of the total increase occurs in the first ten texts, the percentage of the total increase is higher than 50%. That is, students gained a greater increase in the first ten texts. On the other hand, if more of the total increase occurs in the second ten texts, the percentage of the total increase is less than 50%. It means students had more of the total increase in the second ten texts.

TABLE 6
Increase in Words per Minute in the First Ten and Second Ten Texts

Students	Increase in the first ten texts	Increase in the second ten texts	Total increase	% of the total increase in the first half	Bigger increase in the first half
3	98	-62	36	272	Y
4	35	-6	29	121	Y
5	3	0	3	100	Y
6	21	0	21	100	Y
9	88	0	88	100	Y
12	55	0	55	100	Y
18	227	0	227	100	Y
20	47	0	47	100	Y
30	26	0	26	100	Y
38	96	0	96	100	Y
1	133	18	151	88	Y
7	132	21	153	86	Y
10	72	12	84	86	Y
15	147	37	184	80	Y
24	77	20	97	79	Y
17	53	15	68	78	Y
32	41	12	53	77	Y
16	114	34	148	77	Y
37	53	24	77	69	Y
25	38	18	56	68	Y
27	79	24	103	77	Y
13	109	64	173	63	Y
22	79	48	127	62	Y
26	136	29	165	59	Y
39	38	62	100	57	Y
23	109	94	203	54	Y
31	25	22	47	53	Y
28	30	30	60	50	Same
14	71	80	151	47	N
36	109	124	233	47	N
11	59	71	130	45	N
40	47	80	127	37	N
8	32	68	100	32	N
21	32	69	101	32	N
19	7	49	56	13	N
35	16	116	132	12	N
33	0	37	37	0	N
29	-10	-6	-16	63	N
34	-33	56	23	-143	N

There are problems with this calculation. Firstly, when students decreased their speed in the first ten texts, the percentage of the increase was negative. Secondly, when students did not gain an increase at all in the second ten texts, the percentage of the total increase was 100% regardless of the different amounts of the increase in the first ten texts. Third, when a student's speed was negative in the first ten texts (that is their speed on text 10 was lower than their speed on text 1), and also negative in the second ten texts, the result became positive due to double negatives, resulting in a bigger increase in the first half. In these cases, we have to evaluate the data manually. For this reason, the sixth column (see Table 6) shows whether the first half increase is greater than the second half. *Yes* means a bigger increase in the first half. So in Table 6, student #1 was identified as in the *Yes* group because he got 88% of the total increase in the first ten texts while student #29 was identified as in the *No* group because even though she got 63%, due to double negatives, meaning a bigger increase in the first ten texts, she had a minus ten score in the first ten texts which is smaller than minus six in the second ten texts.

29 out of 40 students gained most of their increase in the first ten texts, and 11 students gained most of their increase in the second ten texts. In brief, most of the increase occurred in the first ten texts for almost three-quarters of the students, but a significant number of the students did better in the second half. If this is the case, is it better to stop the speed reading course after the first ten texts?

As shown in Table 6 above, 11 (27.5%) out of 40 students did not obtain an increase at all in the second ten texts, but 29 (72.5%) students obtained an increase from 12 to 124 words per minute. That is, over 70% of the students gained a further increase after reading more than ten texts.

Even though almost three-quarters of the forty students gained most of the increase in the first ten texts, the speed of the students in many cases is below 200 words per minute after reading the first ten texts. Nation (2005) notes that around 300 words per minute are a good speed for careful silent reading. Thus, it is worth trying to read more than ten texts in order to continue to get the benefits of speed reading training.

3. What Are the Patterns of Progress in Speed?

It is obvious, when looking at the shape of students' graphs, that students progress through the course in different ways. Some make a fairly steady increase. Some increase, then make very little increase for a few texts (a plateau), and then increase again. Others are very erratic, going up and down unpredictably. A few make no increase.

In order to see the patterns of speed increase, the following criteria were used to classify the various students' speed graphs. Firstly, whether the speed changed or not is determined by the percentage of the total increase in the average scoring method (see Table 1). If the

score of the percentage is negative, its pattern is identified as 'no change' and if the percentage is positive, its pattern is identified as 'change'. Since speed reading itself has ups and downs in almost all cases, a positive percentage is considered to be a gain in speed. Figure 1 is an example of a no change graph.

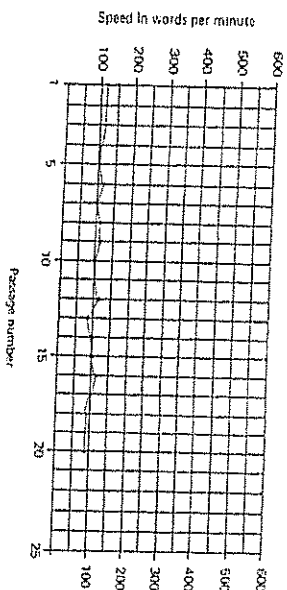


FIGURE 1
No Change Graph

Secondly, the *change* group is divided into 4 subgroups: gradual, erratic, plateau, and mixed increase.

In order to be selected as a pattern of gradual-increase, the difference between the starting point and the end point in a falling line should be less than 70 words per minute. That is, this pattern does not have any sharply falling curves. 70 is chosen arbitrarily, but when the difference between the starting and end point is 70 or more, it is quite noticeable, so it looks like a sharp curve. Figure 2 shows a pattern of gradual increase.

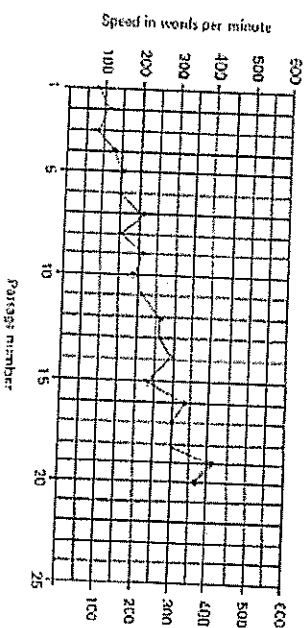
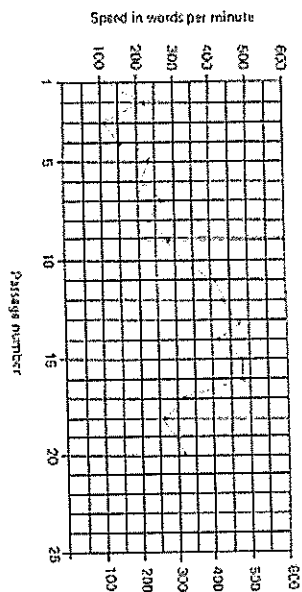


FIGURE 2
Gradual-Increase Pattern

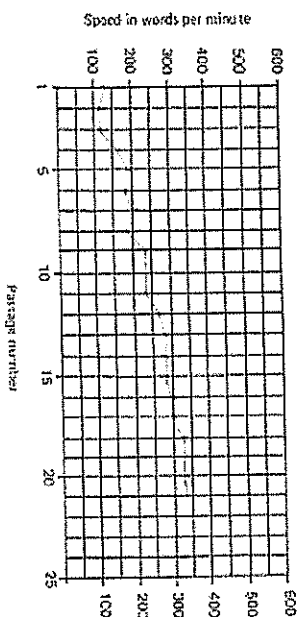
The erratic-increase pattern (see Figure 3) has a curve sharply rising and sharply falling at least twice as shown in the graph below. The difference between the starting and end point in a rising line or a falling line should be more than 70 words.

FIGURE 3
Erratic-Increase Pattern



The plateau-increase pattern has the feature of three similar successive scores, happening twice or more as in the graph below. *Smaller* means the difference between the three successive scores is 10 words per minute or less. 10 is chosen because differences less than 10 on the graph are not easily distinguishable. The difference between the one plateau and the other plateau should be more than 30 in order to distinguish the patterns of no change and plateaus. In Figure 4, the plateaus occur with texts 9-11, 13-15, and 18-21.

FIGURE 4
Plateau-Increase Pattern



The mixed-increase pattern has at least two kinds of patterns such as erratic and plateau, or gradual and plateau.

TABLE 7
Number of Students in Each Pattern

No. of students	Change				No change
	Gradual increase	Erratic increase	Plateau increase	Mixed increase	
30	4	4	2	2	2

As shown in Table 7, 38 out of the 40 students had a *change* pattern, and only two students had a *no-change* pattern. Most (three-quarters) of the students had a gradual-increase pattern. A small number of the students had the patterns of erratic, plateau, and mixed.

V. CONCLUSION

Three methods were examined to measure the amount of increase in reading speed: the average scoring method, the highest minus lowest scoring method, and the 20th minus 1st scoring method. Among the three scoring methods, the average scoring method was the most conservative.

The 20th minus 1st scoring method was used to find out whether most of the increase achieved in the first half or in second half of the 20 texts. A reasonable number (11) of the students did better in the second half although almost three-quarters of the students achieved more increase in the first half. In addition, over 70% of the students continued to increase by 12 to 124 words per minute in the second half. Thus, it is worthwhile to continue to provide opportunities for speed reading training after the first ten texts.

Five patterns were identified in the reading speed graphs: gradual, erratic, plateau, mixed increase, and no change. Almost all students had a *change* pattern as a result from gaining a speed increase. Among the *change* pattern, the most common by far was the gradual-increase pattern. In brief, this study has shown that most students increased their reading speed from following a speed reading course. This should give them confidence in reading, and have a positive effect on the amount they read.

On the basis of the conclusion, a number of pedagogical implications for a speed reading course can be considered. Firstly, a speed reading course would be applicable for every student level. For beginners, the book *Speed Reading* (Quinn & Nation, 1974) written within the most frequent 1000 words of English (West, 1953) is available. *New Zealand Speed Readings for ESL Learners* (Millet, 2005), Books one and two are suitable for

intermediate and advanced learners. Book one is written within the most frequent 2000 words of English (West, 1953), and Book two within the first 2000 words plus the 570 academic words (Coxhead, 1998).

Secondly, a speed reading course should be included in every reading class. Reading instruction should involve meaning-focused reading, language-focused reading and fluency development, and give equal amounts of class time to each of them. (Nation, 2001). Various reading activities should be included in reading instruction to make it balanced and effective (Chung, forthcoming). Thus a speed reading course as one of the means to develop fluency would fit into all reading classes.

Thirdly, a speed reading course is helpful for learners to increase their reading speed in a short time. Assuming that the class meets twice a week, it takes about 12 weeks to run one series of speed reading sessions – not a long period. If the speed reading is partly done as homework, the course period could be shortened.

For a researcher who wants to repeat this study, gathering the raw speed scores or time taken for reading along with a graph is strongly recommended as it makes calculations much easier. It is also suggested that before starting a speed reading course, vocabulary level tests should be given in order to find out whether students have a high enough English proficiency to attend the course. The 1000-word level test is given in the book, *Speed Reading: The 2000-word level test and the academic words test* are available in Schmitt, Schmitt, and Clapham (2001) and Nation (2001). If students have good English, and are provided with speed reading training, there is a high probability of substantial increases in speed. In future research, the reasons why some students do not increase their speed need to be examined.

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APPENDIX A
An Example of the Texts Used for Speed Reading

13 The English Language

The story of the English language is a story of change. The old English language, or Old English, is different from Modern English. If we do not study Old English, we cannot understand it. Some of the words are the same but many are not used now. The story of the English language begins some time after the year A.D. 400. At this time some people came to England from North-West Europe. There were many groups of people. They were called Angles, Saxons and Jutes. Their language, Old English, is like some of the modern languages of North-West Europe. In Old English the ends of words were very important. These endings had many meanings. They showed past time and present time and many other things. In Modern English most of these endings are gone. This is the biggest difference between old and modern English.

When the church became important in England, Old English became a written language. Before this writing was not very important. Only a few people wrote English. Latin, the old language of Italy, was used in the church. Because of this many Latin words became a part of the English language. The word *school* came from the Latin language. At that time most schools were a part of the church. In the year 1066 soldiers from France attacked England. French became the language of England. English was not usually used for writing books or songs. For about two hundred years French was the most important language. Most of the poor people did not learn French. They still used English. English slowly became more important again. Many of the schools began to use English and not French. But English took many French words. Very often there were two words for one thing, a French word and English

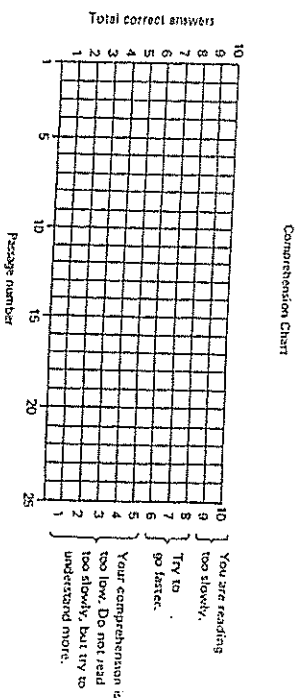
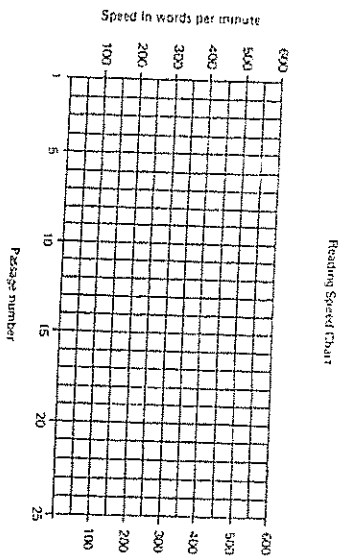
word. In Modern English, *ask* and *demand* have almost the same meaning. *Ask* comes from Old English and *demand* comes from French. English has many words like this. The English language between 1066 and 1500 is called Middle English. Some time after 1500 we have the beginning of Modern English. At this time many books were made and so the spelling of English did not change very much. There were many new schools. English sailors went to many countries of the world. Words from their languages became a part of English. Latin was still an important language in England but English was becoming more and more useful. Many good books were written in English. Writers, like Shakespeare, used the language in many beautiful ways. All the time many new words were borrowed from other languages. Many of the old words were changed. Sometimes their meaning was changed, sometimes their spelling was changed. About 1750 many books were written about the English language. These books showed the correct language. Because of them the spoken language became different from the written language. When people wrote, they were very careful. When they spoke, they were not careful. The written language was like the Latin language. It used very long words and sentences. After 1800 the written language became like the spoken language. Sentences were shorter and people used easier words. It is like this today. The English language is still changing. When a language does not change, it is less and dead.

Write the time and then answer the questions.

(350 words)

APPENDIX B
An Example of a Student's Chart

Charts and Conversion Table



If you get less than six answers correct, ask your teacher for help.

APPENDIX C
The Conversion Chart

CHANGE YOUR TIME INTO WORDS PER MINUTE

Time (minutes seconds)	Words per minute	Time (minutes seconds)	Words per minute
0 50	6.62	4 00	1.36
1 00	5.50	4 10	1.32
1 10	4.71	4 20	1.27
1 20	4.14	4 30	1.22
1 30	3.67	4 40	1.18
1 40	3.30	4 50	1.14
1 50	3.00	5 00	1.10
2 00	2.75	5 10	1.06
2 10	2.54	5 20	1.03
2 20	2.36	5 30	1.00
2 30	2.20	5 40	0.97
2 40	2.06	5 50	0.94
2 50	1.94	6 00	0.92
3 00	1.83	6 10	0.89
3 10	1.74	6 20	0.87
3 20	1.65	6 30	0.85
3 30	1.57	6 40	0.82
3 40	1.50	6 50	0.81
3 50	1.44		

APPENDIX D

40 Students' Scores Used for Average Scoring Method

Students	1 st score	2 nd score	3 rd score	Average of the first 3 scores	18 th score	19 th score	20 th score	Average of the last 3 scores	Total increase	% of the total
36	97	110	97	101	300	414	330	348	247	244
23	127	118	118	121	300	330	330	320	199	164
22	100	150	150	133	300	367	330	332	199	149
18	103	206	103	137	254	300	330	295	157	115
13	127	132	150	136	275	254	300	276	140	103
39	94	150	183	142	300	254	236	263	121	85
1	103	165	157	142	275	254	254	261	119	84
35	122	110	127	120	194	206	254	218	98	82
14	103	138	157	133	254	254	206	238	105	79
8	106	132	110	116	194	194	206	198	82	71
15	183	236	254	224	367	367	367	367	143	64

7	122	194	165	160	275	236	275	262	102	63
2	127	206	174	169	275	275	254	268	99	59
16	106	194	174	158	220	275	254	250	92	58
25	127	127	174	123	183	206	183	191	68	55
11	106	127	132	122	174	157	236	189	67	55
9	118	174	150	147	220	236	206	221	73	50
24	97	122	144	121	174	174	194	181	60	49
17	97	122	122	114	174	157	165	165	52	45
37	97	127	144	123	194	157	174	175	52	43
27	100	94	127	107	127	150	174	150	43	40
31	97	110	110	106	144	150	144	146	40	38
38	110	165	165	147	206	194	206	202	55	38
10	122	122	220	155	220	206	206	211	56	36
21	174	220	174	189	275	220	275	257	67	36
6	144	138	157	146	206	206	165	192	46	31
28	97	144	122	121	157	157	157	157	36	30
26	127	144	150	140	165	183	194	181	40	29
33	157	150	157	135	220	183	194	199	44	29
40	127	194	183	168	174	220	254	216	48	29
19	150	150	103	134	150	144	206	167	32	24
32	97	100	144	114	122	132	150	135	21	18
4	103	132	132	122	150	144	132	142	20	16
12	165	194	194	184	220	194	220	211	27	15
30	194	194	206	198	225	236	220	227	29	15
3	138	174	165	159	183	174	174	177	18	11
20	103	174	194	157	206	157	150	171	14	9
34	183	174	206	188	183	183	206	191	3	2
5	97	103	106	102	97	100	100	99	-3	-3
9	110	110	110	110	100	94	94	96	-14	-13

Applicable level: tertiary education
Key words: speed reading, reading fast, developing reading fluency

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